



AVIC-F88DAB
AVIC-F80DAB
AVIC-F980DAB
AVIC-F980BT
AVIC-F9880DAB
AVIC-F9880BT
NAVIGATION AV SYSTEM

Operation Manual

Be sure to read **Important Information for the User** first!
Important Information for the User includes the important information that you must understand before using this product.

Contents

Thank you for buying this Pioneer product. Please read through these instructions so you will know how to operate your model properly. After you have finished reading the instructions, keep this document in a safe place for future reference.

Important

The screens shown in the examples may differ from actual screens, which may be changed without notice for performance and function improvements.

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Precaution

Notes on internal memory

Before removing the vehicle battery

If the battery is disconnected or discharged, the memory will be erased and must be reprogrammed.

- Some of the settings and recorded contents will not be reset.

Data subject to erasure

The information is erased by disconnecting the yellow lead from the battery (or removing the battery itself).

- Some of the settings and recorded contents will not be reset.

Resetting the microprocessor

CAUTION

Pressing the **RESET** button resets settings and recorded contents to the factory settings.

- Do not perform this operation when a device is connected to this product.
- Some of the settings and recorded contents will not be reset.

The microprocessor must be reset under the following conditions:

- Prior to using this product for the first time after installation.
- If this product fails to operate properly.
- If there appears to be problems with the operation of the system.
- If your vehicle position is shown on the map with a significant positioning error.

1 Turn the ignition switch OFF.

2 Press the RESET button with a pen tip or other pointed implement.

Refer to *Checking part names and functions* on page 4

Settings and recorded contents are reset to the factory settings.

About this manual

This manual uses diagrams of actual screens to describe operations. However, the screens on some products may not match those shown in this manual depending on the model used.

Meanings of Symbols Used in This Manual

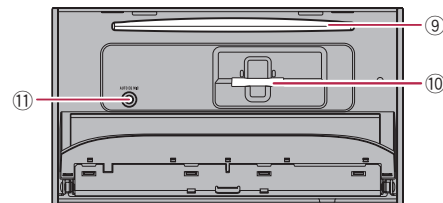
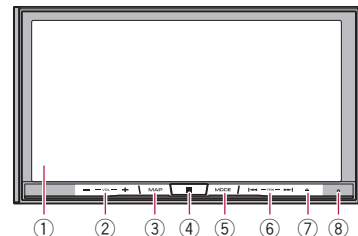
X0000BT	This indicates model name that are supported the described operations.
	This indicates to touch an appropriate soft key on the touch screen.
	This indicates to touch and hold an appropriate soft key on the touch screen.
	This indicates that there is a reference or supplementary for the key or screen.

Basic operation

Checking part names and functions

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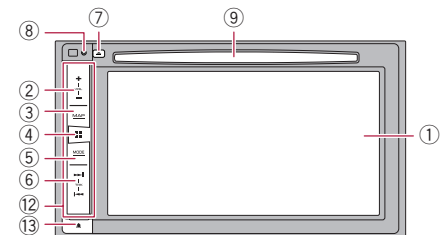


F980DAB

F980BT

F9880DAB

F9880BT



- 1 LCD screen
- 2 VOL (+/-) button

Basic operation

3	MAP button	Press to display the map screen. Press and hold to switch to the camera view mode. ❑ This function is available only when "Back Camera Input" or "2nd Camera Input" is set to "On".
4	 button	Press to display the top menu screen. Press and hold to activate the voice recognition function. ➡ Refer to <i>Using the voice recognition function</i> on page 33
5	MODE button	Press to switch between the Application screen and the AV operation screen. Press to turn the display off. ❑ Press and hold to turn the display off when the Application screen is available. ❑ When the display is turned off, touch the screen to revert to the original screen.
6	TRK   button	Press to return to the previous track (chapter) or go to the next track (chapter). Press and hold to perform fast reverse or fast forwards. Press to answer or end a call.
7	 button	
8	RESET button	➡ Refer to <i>Resetting the microprocessor</i> on page 4
9	Disc-loading slot	➡ Refer to <i>Inserting and ejecting a disc</i> on page 6
10	SD card slot	➡ Refer to <i>Inserting and ejecting an SD memory card</i> on page 6
11	Auto EQ microphone input jack	Use to connect a microphone for acoustical measurement (sold separately).
12	Detachable faceplate	
13	 button	Press to remove the detachable faceplate from this product.

- ❑ The remote control CD-R33 (sold separately) is available.
➡ For details, refer to the remote control manual.

Protecting your product against theft

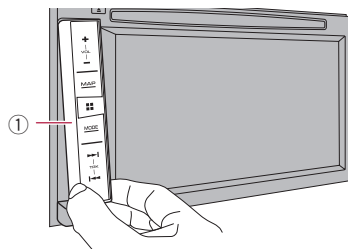
F980DAB F980BT F9880DAB F9880BT

⚠ CAUTION

- Do not expose the detachable faceplate to excessive shock or disassemble it.
- Never grip the buttons tightly or use force when removing or attaching the detachable faceplate.
- Keep the detachable faceplate out of reach of small children to prevent them from placing it in their mouths.
- After removing the detachable faceplate, keep it in a safe place so it is not scratched or damaged.
- Do not expose the detachable faceplate to direct sunlight and high temperatures.
- When removing or attaching the detachable faceplate, do so after turning off the ignition switch (ACC OFF).

Removing the detachable faceplate

- Press the  button.
- Gently grip the bottom of the detachable faceplate and slowly pull it outward.



① Detachable faceplate

Attaching the detachable faceplate

- Slide the detachable faceplate all the way into this product.
- Push the lower part of the detachable faceplate until you hear a click.

Notes on using the LCD panel

F88DAB F80DAB

⚠ WARNING

- Keep hands and fingers clear of this product when opening, closing, or adjusting the LCD panel. Be especially cautious of children's hands and fingers.
- Do not use with the LCD panel left open. It may result in injury in the event of an accident.

⚠ CAUTION

- Do not open or close the LCD panel by force. It may cause a malfunction.
- Do not operate this product until the LCD panel has completely opened or closed. If this product is operated while the LCD panel is opening or closing, the LCD panel may stop at that angle for safety.
- Do not place a glass or can on the open LCD panel.

Adjusting the LCD panel angle

F88DAB F80DAB

- Press the  button.
 - Touch  or  to adjust the angle of the LCD panel.
 - Touch .
- Returns to the previous screen.

Inserting/ejecting/connecting media

⚠ CAUTION

- Do not insert anything other than a disc into the disc-loading slot.
- Do not insert anything other than SD memory cards into the SD card slot.
- Ejecting an SD memory card during data transfer can damage the SD memory card. Be sure to eject the SD memory card by the procedure described in this manual.
- Do not press the  button when an SD memory card is not fully inserted. Doing so may damage the card.
- Do not press the  button before an SD memory card has been completely removed. Doing so may damage the card.

Basic operation

Inserting and ejecting a disc

Inserting a disc

F88DAB F80DAB

- 1 Press the **▲** button.
- 2 Touch **[⏮]** to open the LCD panel.
- 3 Insert a disc into the disc-loading slot.

F980DAB F980BT F9880DAB F9880BT

- 1 Insert a disc into the disc-loading slot.

Ejecting a disc

F88DAB F80DAB

- 1 Press the **▲** button.
- 2 Touch **[⏮]** to open the LCD panel.
- 3 Remove the disc, and press the **▲** button.

F980DAB F980BT F9880DAB F9880BT

- 1 Press the **▲** button.

Inserting and ejecting an SD memory card

F88DAB F80DAB

- ☐ This system is not compatible with the Multi Media Card (MMC).
- ☐ Compatibility with all SD memory cards is not guaranteed.
- ☐ This product may not achieve optimum performance with some SD memory cards.

Inserting an SD memory card

- 1 Press the **▲** button.
- 2 Touch **[⏮]** to open the LCD panel.
- 3 Insert an SD memory card into the SD card slot.
- 4 Press the **▲** button.

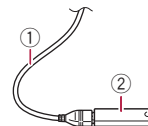
Ejecting an SD memory card

- 1 Press the **▲** button.
- 2 Touch **[⏮]** to open the LCD panel.
- 3 Press the middle of the SD memory card gently until it clicks.
- 4 Pull the SD memory card out straight.
- 5 Press the **▲** button.

Plugging and unplugging a USB storage device

- ☐ This product may not achieve optimum performance with some USB storage devices.
- ☐ Connection via a USB hub is not possible.
- ☐ A USB cable is required for connection.

- 1 Pull out the plug from the USB port of the USB cable.
- 2 Plug a USB storage device into the USB cable.



- ① USB cable
- ② USB storage device
- ☐ Check that no data is being accessed before pulling out the USB storage device.

Basic operation

On first-time startup

1 Start the engine to boot up the system.

The "Select Program Language" screen appears.

- From the second time on, the screen shown will differ depending on the previous conditions.
- From the second time on, enter the password for the anti-theft function if the password entry screen appears.

2 Touch the language.

3 Touch .

The "Smartphone Setup" screen appears.

4 Touch the item.

- ☞ Refer to *Information on the connections and functions for each device* on page 35

5 Touch .

F88DAB **F80DAB** **F980DAB** **F9880DAB**

The "DAB ANTENNA POWER SETTING" screen appears.
Proceeds to the next step.

F980BT **F9880BT**

The warning message screen appears.
Proceeds to step 8.

6 Touch [Yes] or [No].

- **Yes** (default):
Supplies power to a Digital Radio aerial. Select when using the optional Digital Radio aerial (AN-DAB1 or CA-AN-DAB.001) (sold separately) with this product.
- **No**:
Does not supply power. Select when using a passive aerial with no booster.

7 Touch .

The warning message screen appears.

8 Touch [OK].

The top menu screen appears.

On first-time startup of the navigation system

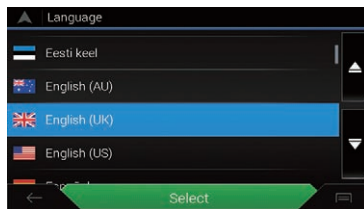
When you use the navigation function for the first time, an initial setup process starts automatically. Follow the steps below.

- You can change the language later using [Regional] in the "Settings" screen. Other settings can be restarted later using [Start Configuration Wizard] in the "Settings" screen.

1 Press the button.

2 Touch or .

3 Touch the language that you want to use on the navigation screen, then touch [Select].



4 Read the terms carefully, checking the details, and then touch [Accept] if you agree to the conditions.

5 Touch [Next].

6 Touch the language that you want to use for voice guidance messages, then touch [Next].

7 If needed, modify the unit settings, then touch [Next].

8 If needed, modify the default route planning options, then touch [Next].

9 Touch [Activate], then [Next].

A message saying that the connected online features are activated appears if you activate these services right away.

- ☞ Refer to "Online Services" settings on page 28

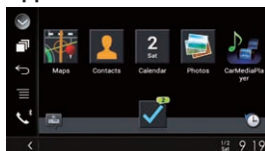
10 Touch the connected services you want to use, then touch [Next].

The initial setup is now complete. The map screen appears and you can start using the navigation system.

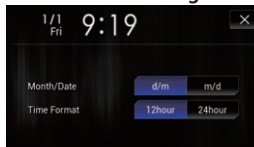
Basic operation

How to use the screens

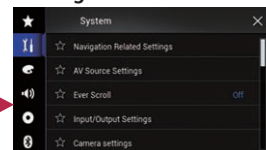
Application menu screen



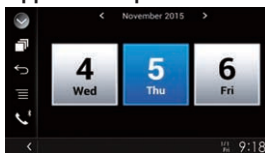
Time and date setting screen



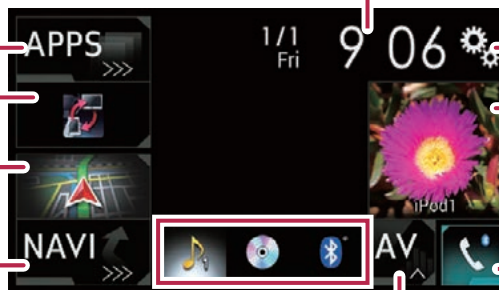
Setting menu screen



Application operation screen

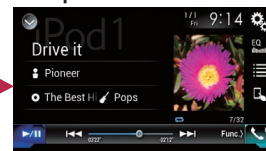


Top menu screen

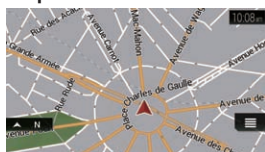


Favorite source icons

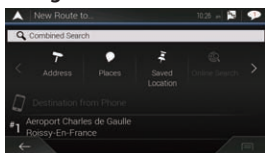
AV operation screen



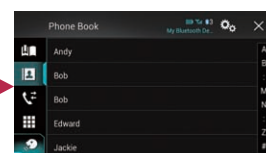
Map screen



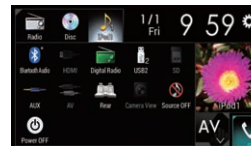
Navigation menu screen



Phone menu screen



AV source selection screen



Basic operation

- ❑ By pressing the **≡** button on any screen you can display the top menu screen.
- ❑ The character string "APPS" is replaced with "Apple CarPlay" when Apple CarPlay is running.
- ❑ **F88DAB/F80DAB**
The character string "APPS" is replaced with "Android Auto" when Android Auto is running.
- ❑ If you select "Power OFF" on the AV source selection screen, you can turn off almost all functions. The "Power OFF" mode is released in the following cases:
 - An incoming call is received.
 - The rear view camera image is input when the vehicle reverses.
 - A button on this product is pressed.
 - The ignition switch is turned off (ACC OFF), then turned on (ACC ON).
- ❑ To protect this product from damage, the cooling fan may operate in "Power OFF" mode.

Supported AV source

You can play or use the following sources with this product.

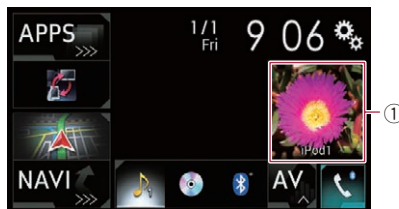
- Radio (FM, MW/LW)
- Digital Radio (DAB) (*1)
- CD
- ROM (compressed audio or video files on discs)
- DVD-Video
- Video-CD

The following sources can be played back or used by connecting an auxiliary device.

- USB
- SD (*2)
- iPod
- Bluetooth® audio
- AV input (AV)
- AUX
- HDMI (*3)
- ❑ (*1) **F88DAB/F80DAB/F980DAB/F9880DAB**
- ❑ (*2) **F88DAB/F80DAB**
- ❑ (*3) **F88DAB**

Displaying the AV operation screen

- 1 Press the **≡** button.
- 2 Touch the AV operation key.



- ① **AV operation key**
The AV operation screen appears.



- ① **Displays the source list.**
② **Recalls equalizer curves.**
➔ Refer to *Using the equaliser* on page 64
③ **Shows the navigation information.**
❑ This is not displayed for some sources.
❑ This is not displayed when "Navigation info window" is set to "Off".
➔ Refer to *Setting the navigation information bar* on page 58

Selecting a source

Source on the AV source selection screen

- 1 Display the AV source selection screen.



- 2 **Touch the source icon.**
❑ When you select "Source OFF", the AV source is turned off.

Source on the source list

- 1 **Display the source list.**
➔ Refer to *Displaying the AV operation screen* on page 9
- 2 **Touch the source key.**
❑ When you select "Source OFF", the AV source is turned off.

Changing the display order of sources

Changing the display order of source icons

- 1 Display the AV source selection screen.



- 2 **Touch and hold a source icon, and drag the icon to the desired position.**

Changing the display order of source keys

- 1 **Display the source list.**
➔ Refer to *Displaying the AV operation screen* on page 9
- 2 **Touch .**
- 3 **Drag the source key to the desired position.**

Using the touch panel

You can operate this product by touching the keys on the screen directly with your fingers.

- ❑ To protect the LCD screen from damage, be sure to touch the screen only with your finger gently.

Basic operation

Common touch panel keys

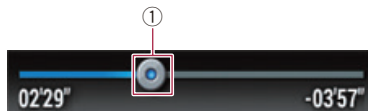
- [↶]: Returns to the previous screen.
- [X]: Closes the screen.

Operating list screens



- ① Touching an item on the list allows you to narrow down the options and proceed to the next operation.
- ② Appears when all characters are not displayed on the display area.
If you touch the key, the rest are scrolled for display.
- ③ Appears when items cannot be displayed on a single page.
Drag the slider bar or the list to view any hidden items.

Operating the time bar



- ① You can change the playback point by dragging the key.
 - ❑ Playback time corresponding to the position of the key is displayed while dragging the key.
 - ❑ This function is not available for some media or sources.

Switching the operation panel

1 Touch [Func].

- The hidden function keys appear.
- ❑ This key does not appear for some AV sources.

Operating the on-screen keyboard



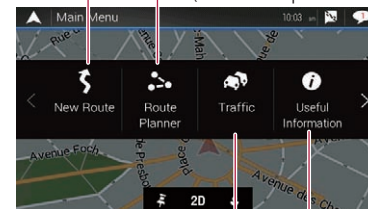
- ① Displays the characters that are entered.
- ② Moves the cursor to the right or left for a number of characters equivalent to the number of touches.
- ③ Enters the characters in the text box.
- ④ Deletes the input text to the left of the cursor one letter at a time. Touching and holding the key deletes the letters to the left of the cursor in rapid succession.
- ⑤ Confirms the entry and proceeds to the next step.
- ⑥ Enters a space.
- ⑦ Switches between alphabet and numbers/symbols.
- ⑧ Switches between capital and lower case letters.

How to use the Navigation menu screen

Searches for your destination by the address or coordinates, or searches for the selected place of interest, etc.

Builds your route or edits the route currently set.

Main Menu 1
(without a planned route)



Displays the traffic screen.

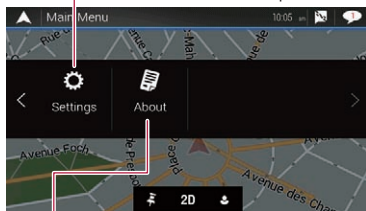
Displays useful information to support your driving.

How to use the Navigation menu screen

Configures the navigation-related settings.

You can also access the “SyncTool” screen from this menu.

Main Menu 2
(without a planned route)



Displays information about your navigation system.

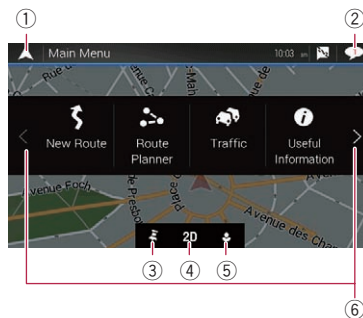
The version information, or licenses can be displayed, for example.

Operating the Navigation menu screen

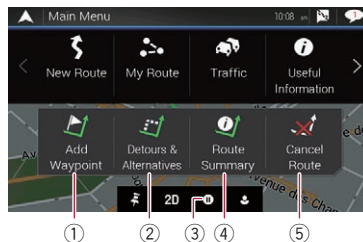
- 1 Press the MAP button.
- 2 Touch .

Other items

You will also see the following keys when you are navigating without a planned route.



- ① Returns to the map screen.
 - ② Displays notifications that contain important information.
 - ③ Displays the location that you saved as a favourite.
 - ④ Switches among 2D, 3D, and 2D North up view modes.
 - ⑤ Displays the “User Profiles” screen where you can create new profiles or edit the existing profiles.
If multiple drivers are using this product, they can create their own profiles with their own settings. If you select a new profile, this product restarts so that the new settings can take effect.
 - ⑥ Displays the previous or next page of the navigation menu.
If there is no next or previous page, this item is grayed out.
- ☐  on the upper right corner of the screen is used for **AVICSYNC App** connection.
- ➔ Be sure read *Expanding the use of the navigation functions* (page 29) before using the **AVICSYNC** function.
- When you are navigating a planned route, the following route-related keys are available.



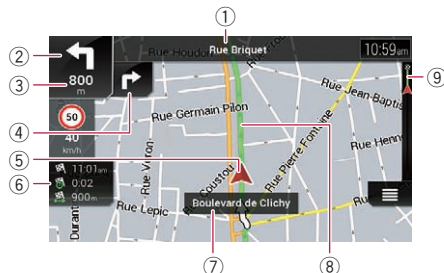
- ① Adds a waypoint.

- ② Displays route alternatives, parts of the route to avoid, or specific roads in your planned route to avoid.
- ③ Suspends and resumes the route guidance.
- ④ Displays the route in its full length on the map, and displays route parameters and route alternatives.
- ⑤ Deletes your route or removes a waypoint.

How to use the map

Most of the information provided by your navigation system can be seen on the map. You need to become familiar with how information appears on the map.

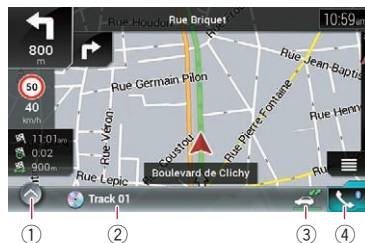
How to read the map screen



- ❑ The following information marked with an asterisk (*) appears only when a route is set.
- ❑ Depending on the conditions and settings, some items may not be displayed.
- ① Shows the number and name of the street to be used (or next guidance point).*
- ② Shows the next guidance point (manoeuvre).*
The type of the event (turn, roundabout, exiting motorway, etc.) is displayed.
➡ Refer to *Frequently shown route events* on page 13
- ③ Shows the distance to the next guidance point (manoeuvre).*
- ④ Shows the maneuver after the next maneuver.*
- ⑤ Indicates the current location of your vehicle. The apex of the triangular mark indicates your orientation and the display moves automatically as you drive.
 - ❑ When there is no GPS position, the triangular mark is transparent. It shows your last known position.
- ⑥ Displays the data field.
- ⑦ Shows the name of the street (or city) that your vehicle is travelling on (or in).
- ⑧ Indicates the current route.*
The route currently set is highlighted in colour on the map.
- ⑨ Indicates the progress to the final destination.*

AV information bar

AV information is displayed at the bottom of the map screen.



- ① Touch to display the AV source list.
- ② Shows the current status of AV source briefly.
- ③ You can turn on or off the communication between the **AVICSYNC App** and the navigation system by touching the key.
 - ❑ This setting is always turned on when you use the **AVICSYNC App** on an iPod / iPhone (the setting cannot be changed).
- ④ Touch to display the phone menu screen.
➡ Refer to *Displaying the phone menu screen* on page 32

Operating the map screen

Changing the scale of the map manually

By default, even if the map scale is changed on the scrolled map, it will return to the preset scale (according to the setting in "Viewpoint" of the "Navigation Map" settings) when the current position map is displayed. If you change the scale of the current position map, perform the following procedure.

- 1 Press the MAP button and touch [Map].
- 2 Touch [Map], and then touch [Settings].
- 3 Touch [Navigation Map], and then [Map Display].
- 4 Touch [Viewpoint].
- 5 Drag the pop-up window and touch [Manual].
- 6 Press the MAP button.
- 7 Touch [Map] or [Map].

Smart Zoom

Your navigation system features "Smart Zoom" that works in two ways:

- When the route is set:
When approaching a turn, "Smart Zoom" will zoom in and raise the view angle to enable you to easily recognise your manoeuvre at the next junction. If the next turn is at a distance, it will zoom out and lower the view angle to be flat so you can see the road in front of you.
- When the route is not set:
"Smart Zoom" will zoom in if you drive slowly and zoom out when you drive at high speed.

Switching between 2D, 3D, and 2D North up views

You can switch how the map is displayed. For 2D map view mode, you can select between "Heading up" and "North up".

- Heading up:
The map display always shows the vehicle's direction as proceeding toward the top of the screen.
- North up:
The map display always has north at the top of the screen.
- ❑ The map orientation is fixed at "Heading up" when the 3D map screen is displayed.

1 Press the MAP button.

2 Touch [Map].

3 Touch the following key.

Each time you touch the key the setting changes.

	Indicates 2D Heading up view mode is currently selected.
	Indicates 3D Heading up view mode is currently selected.
	Indicates 2D North up view mode is currently selected.

- ❑ There is a limit to map scaling in 3D map view mode. If the map scale is zoomed out further, the map is zoomed out in 2D map.

How to use the map

Scrolling the map to the position you want to see

1 Press the **MAP** button.

2 Touch anywhere on the map or touch and drag the map in the desired direction to scroll.

If you place the cursor on the desired location, a brief overview about the location will appear at the top of the screen, showing the street name and other information for the location.

3 Touch .

The map returns to the current position.

☐ If you press the **MAP** button, the map returns to the current position.

Control keys on the scrolled map



Changes the map view mode.

The current map mode is shown on the control key.



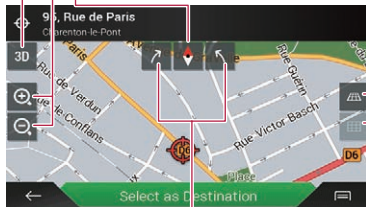
Zooms in or out on the map.

You can also zoom out or in by pinching or expanding the map.



Cancels map rotation.

Map screen (scrolled map)



Rotates the map clockwise or counterclockwise.



Tilts the map angle up or down.

You can change the vertical view angle of the map in 3D mode only.

Understanding the route guidance

Once the route guidance begins, the system provides various guides by voice, text indications and signs.

Frequently shown route events

The following are some examples of the maneuvers that are displayed.

Icon	Meaning
	Turn left, turn right, turn back.
	Go left on the roundabout, 3rd exit (next manoeuvre).
	Enter roundabout (manoeuvre after the next manoeuvre).
	Motorway entrance or motorway exit.
	Board ferry or leave ferry.
	Approaching the destination or a waypoint.

Lane information

When navigating on multilane roads, you will need to make sure to take the proper lane for the recommended route.



How to use the map

Signposts

Signs are displayed at the top of the map.



Junction view

If you are approaching a complex intersection, the map is replaced with a 3D view of the junction.



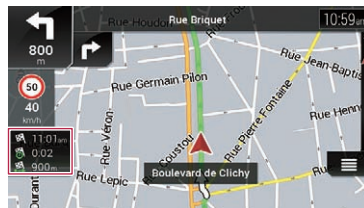
- ❑ If the data for these items is not contained in the map data, the information is not available even if there are signs on the actual road.

When you set **"Offer Motorway Services"** to **"on"**, the  icon appears while you are driving on motorways. Touch the icon to open the details of the next few exits or service stations. In addition, touch an item to show its location on the map. You can set it as a waypoint easily.

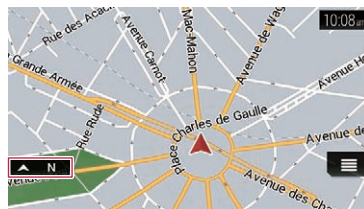
Browsing the data field

The data fields are different when you are navigating a route and when you have no specified destination. For example, the data field provides the following information.

- When the route is set:
Distance to final destination, time needed to reach the final destination and estimated arrival time are shown.



- When the route is not set:
Direction or altitude is shown.



- ❑ Touching and holding the field allows you to display the setting screen for the field.
 - Refer to **Data Fields** on page 27
- ❑ The estimated time of arrival is an ideal value calculated based on the speed limit value set in **"Max. Speed"** of vehicle type setting and the actual driving speed. The estimated time of arrival is only a reference value, and does not guarantee arrival at that time.
 - Refer to **"Route Preferences"** settings on page 25

Searching for a destination

⚠ CAUTION

For safety reasons, these route-setting functions are not available while your vehicle is in motion. To enable these functions, you must stop in a safe place and put on the handbrake.

- ❑ Some information regarding traffic regulations depends on the time when the route calculation is performed. Thus, the information may not correspond with a certain traffic regulation when your vehicle actually passes through the location in question. Also, the information on the traffic regulations provided applies for a passenger vehicle, and not for a truck or other delivery vehicles. Always follow the actual traffic regulations when driving.
- ❑ **[Destination from Phone]** and **[Online Search]** on the **"New Route to..."** screen can be used when the **AVICSYNC App** connection is established.
 - Be sure read *Expanding the use of the navigation functions* (page 29) before using the **AVICSYNC** function.

How to plan your route

The following is a summary of the route setting procedure.

1 Search for a destination using various methods on the **[New Route]** menu.

The location you searched for appears on the **"Map Location"** screen.

2 Touch **[Select as Destination]**.

➤ Refer to *Using the "Map Location" screen* on page 17
The **"Route Summary"** screen appears and countdown begins. When the countdown ends, the guidance automatically starts. If you touch the screen anywhere during the countdown, the countdown stops and the screen will stay as it is.

➤ Refer to *Checking route information and preferences* on page 19

3 Touch **[Start Navigation]**.

Your navigation system starts the route guidance.

➤ Refer to *Understanding the route guidance* on page 13

Searching for a destination

Searching for a location by address

The most frequently used function is the address search in which the address is specified and the location is searched.

□ Depending on the search results, some steps may be skipped.

- 1 Press the MAP button and touch .
- 2 Touch [New Route].
- 3 Touch [Address].
- 4 Touch the following text box and set the destination you are looking for.

● **Country:**

By default, your navigation system proposes the country where you are.

If you want to change the area to search set another country.

● **Town or Postcode:**

By default, your navigation system proposes the city/town where you are. You can select the city/town using its postal code instead of its name.

● **Street:**

If the street name is not available, touch [Go to Town] and select the city/town. This way the centre of the selected city/town becomes the destination of the route.

● **Select House Number or Intersection:**

This item will be displayed after you have set a street. If the house number is not available, touch [Go to Street] and select the street. This way the centre of the selected street becomes the destination of the route.

After you touch the selected address to finish the address search, the searched location appears on the Map screen.

- 5 Touch [Select as Destination], and then touch [Start Navigation].

Your navigation system starts the route guidance.

Searching for Points of Interest (POI)

Information about various facilities (Points Of Interest – POI), such as petrol stations, car parks or restaurants, is available. You can search for a POI by selecting the category (or entering the POI Name).

Searching for POIs using preset categories

The preset search allows you to quickly find the most frequently selected types of POIs.

- 1 Press the MAP button and touch .
- 2 Touch [New Route].
- 3 Touch [Places].

The preset search categories are as follows.

- **Petrol Station**
- **Accommodation**
- **Restaurant**
- **Parking**
- When a route is not set, POIs are searched for around the current position.
- When the current position is not available either (no GPS signal), POIs are searched for around the last known position.
- When a route is set, "Petrol Station" and "Restaurant" are searched for along the route, and "Accommodation" and "Parking" are searched for around the destination.

- 4 Touch the category.

- 5 Touch the POI.

The searched location appears on the map screen.

- If you touch , you can sort the results or show the locations of all facilities on the map.

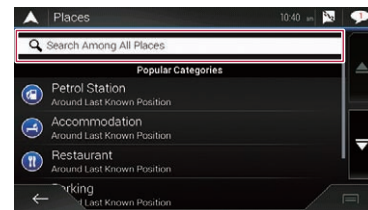
- 6 Touch [Select as Destination], and then touch [Start Navigation].

Your navigation system starts the route guidance.

Searching for POIs by categories or directly from the name of the facilities

You can search for POIs by their categories and subcategories. You can also search for POIs by their names in each of their categories.

- 1 Press the MAP button and touch .
- 2 Touch [New Route].
- 3 Touch [Places].
- 4 Touch [Search Among All Places].



- 5 Touch [Around Here] and then select the area in which the POIs should be searched for.

● **Category View:**

You can select whether or not POI categories are displayed.

● **Around Here:**

Searches around the current position. Or, around the last known position if the current position is not available. (The results will be listed in order of the distance from this position.)

● **In a Town:**

Searches for a place within a selected city/town. (The results will be listed in order of the distance from the centre of the selected city/town.)

● **Around Destination:**

Searches for a place around the destination of the current route. (The results will be listed in order of the distance from the destination.)

□ This key is active only when the route is set.

● **Along Route:**

Searches along the current route, and not around a point already set. This is useful when searching for a stopover that results in a minimal detour, such as searching for petrol stations or restaurants. (The results will be listed in order of the length of the necessary detour.)

□ This key is active only when the route is set.

- 6 Select one of the categories, subcategories or brands to narrow down the places.

- If you touch [Search by Name], you can search for POIs by their names.

- 7 Touch the POI.

The searched location appears on the map screen.

- If you touch , you can change the sort method of the results.

- 8 Touch [Select as Destination], and then touch [Start Navigation].

Your navigation system starts the route guidance.

Searching for a destination

Searching for providers nearby that offer emergency or roadside assistance services

Important

Never use this product to route to hospitals, police stations or similar facilities in an emergency. Stop using any functions relating to the hands-free phoning and please call the appropriate emergency number.

You can search for locations that provide emergency or roadside assistance in the surrounding areas.

- ❑ This information does not necessarily correspond to actual information. Utilise the information for your reference.

1 Press the MAP button and touch .

2 Touch [Useful Information].

3 Touch [Help Nearby].

The preset search categories are as follows.

- Car Repair
- Health
- Police
- Petrol Station

4 Touch the category.

5 Touch the POI.

The searched location appears on the map screen.

- If you touch , you can change the sort method of the results.

6 Touch [Select as Destination], and then touch [Start Navigation].

Your navigation system starts the route guidance.

Selecting a destination from stored locations

Storing locations you visit frequently saves time and effort. Selecting an item from the list provides an easy way to specify the position.

The list of saved locations contains two preset categories: **Home** and **Work**.

- ❑ This function is available if locations have been registered in "Saved Location".
 - ➔ Refer to *Storing a location in "Saved Location"* on page 20

1 Press the MAP button and touch .

2 Touch [New Route].

3 Touch [Saved Location].

- If you touch  and then [Edit], you can edit the details of saved locations.

4 Touch the entry.

The searched location appears on the map screen.

5 Touch [Select as Destination], and then touch [Start Navigation].

Your navigation system starts the route guidance.

Selecting a destination from stored routes

Storing routes you use frequently saves time and effort.

- ❑ This function is not available if no routes have been registered in "Saved Routes".
 - ➔ Refer to *Storing a route in "Saved Routes"* on page 20

1 Press the MAP button and touch .

2 Touch [New Route].

3 Touch to show the next page.

4 Touch [Saved Routes].

5 Touch the entry.

- ❑ You can add waypoints or change the final destination on the "Route Planner" screen.
 - ➔ Refer to *Building a route using "Route Planner"* on page 18

6 Touch [Show Route], and then touch [Start Navigation].

Your navigation system starts the route guidance.

Selecting a location you searched for recently

The places that were previously set as destinations or waypoints have been automatically stored in "History".

History

1 Press the MAP button and touch .

2 Touch [New Route].

3 Touch to show the next page.

4 Touch [History].

5 Touch the entry.

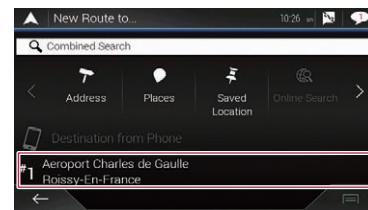
The searched location appears on the map screen.

6 Touch [Select as Destination], and then touch [Start Navigation].

Your navigation system starts the route guidance.

Smart History

Smart History suggests these previously used locations as destinations based on your navigation habits, using parameters like the current time of day, the day of week, and the current location. Smart History items are shown in the "New Route to..." screen for easy access.



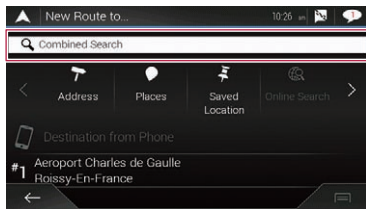
Searching for a destination

Searching for a location using "Combined Search"

The "Combined Search" feature lets you quickly find a place by its name and search area.

- ❑ The "Combined Search" function also searches your stored data.

- 1 Press the MAP button and touch .
- 2 Touch [New Route].
- 3 Touch [Combined Search].



- 4 Touch the right text box to enter the country and city/town.
 - 5 Enter the name, address, or category of the destination to the left text box, then touch .
 - 6 Touch the entry.
- The searched location appears on the map screen.
- 7 Touch the right of the list to narrow down the search results.
- If you touch a map data provider logo, you can narrow down the list of results by showing the results from the provider.
- 8 Touch [Select as Destination], and then touch [Start Navigation].

Your navigation system starts the route guidance.

Searching for a location by the coordinates

Entering a latitude and longitude pinpoints the location.

- 1 Press the MAP button and touch .

- 2 Touch [New Route].
 - 3 Touch  to show the next page.
 - 4 Touch [Coordinates].
 - 5 Enter the latitude value and touch [OK].
- ❑ When a value is already entered in the text field, delete the value first.
 - ❑ You can change the display format of the latitude and longitude to any of the following formats: decimal degrees; degrees and decimal minutes; or degrees, minutes and decimal seconds.
 - When entering the coordinates in UTM format, touch , then [UTM Coordinates].
- 6 Enter the longitude value and touch [Go!].
- ❑ When a value is already entered in the text field, delete the value first.
- The searched location appears on the map screen.
- 7 Touch [Select as Destination], and then touch [Start Navigation].
- Your navigation system starts the route guidance.

Searching for a location by scrolling the map

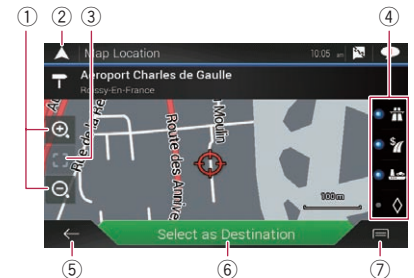
Specifying a location after scrolling the map enables you to set the position as a destination or waypoint.

- 1 Press the MAP button.
 - 2 Touch and drag the screen to scroll the map.
 - 3 Touch the location that you want to select as your destination.
- The cursor appears.
- 4 Touch [Select as Destination], and then touch [Start Navigation].

Your navigation system starts the route guidance.

Using the "Map Location" screen

Once a location is searched, the "Map Location" screen appears. You can select some options for the route or displayed map location before route calculation.



- ❑ If you touch the map, the cursor is placed at that position. Also, you can scroll the map by dragging the map.
- ① Zoom in/zoom out
 - ❑ You can also pinch or expand the map to zoom in or out.
 - ② Cancels the "Map Location" screen and displays the map of the current position.
 - ③ Returns the cursor to the initial position and the map scale to the initial scale.
 - ④ Shows the route setting preferences for route calculation. Touch the keys to activate or deactivate the preference.

	Calculates the route prioritising the use of motorways when the key is activated.
	Calculates the route prioritising the use of per-use charged toll roads when the key is activated.
	Calculates the route prioritising the use of ferries when the key is activated.
	Calculates the route prioritising the use of car-pool and HOV lanes when the key is activated.

- ⑤ Returns to the previous screen.
 - ⑥ Sets the cursor position to your destination (or waypoint).
 - ⑦ Displays the shortcuts.
- **Detailed Information:**
 - Shows the detailed information of the point.
 - **Save Location:**
 - Saves the displayed location as your favourite location. The saved location can be easily recalled later.
 - **Places Around Cursor:**
 - Searches for POIs around the displayed location. Touch the POI to show the "Map Location" screen, and also set the POI as the destination (or waypoint).

Checking and modifying the current route

Modifying the route

When navigation is already started, there are several ways to modify the current route. The following sections describe some of those options.

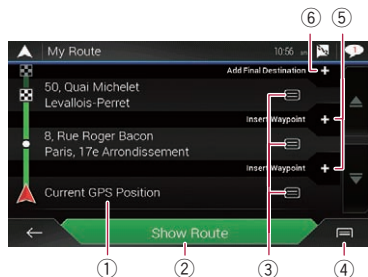
Building a route using "Route Planner"

The "Route Planner" (or "My Route") feature lets you build your route using the list of destinations.

Editing the list allows you to plan your route easily.

- ❑ Once you set the route, you can edit your route using the menu displayed as "My Route".

- 1 Press the MAP button and touch .
- 2 Touch [Route Planner] or [My Route].
- 3 Touch one of the options.



- ① Starting position (The current vehicle position is set as default and [Current GPS Position] is displayed.)
 - ➔ Refer to *Changing the starting position* on page 18
- ② Calculates the route and shows the "Route Summary" screen.
- ③ Displays the options for the location.
 - **Move Up/Move Down:**
Edits the order you want to visit the locations.
 - **Delete:**
Deletes the destination or waypoint.
 - **Save Location:**
Stores the location in "Saved Location".
 - ➔ Refer to *Storing a location in "Saved Location"* on page 20
 - **Change:**
Changes the destination or waypoint to another location.

- **Show on Map:**
Shows the selected location on the map.
- ④ Displays the shortcuts.
 - **Delete All:**
Deletes all waypoints and the destination. Touch [Continue Without Route] to cancel the planned route.
 - **Optimise Waypoints:**
Changes the order of waypoints automatically so that the route can be easily travelled. (If the resulting order is the same as the current order, this option is invalid.)
 - **Optimise Route:**
Changes the order of all waypoints and the destination automatically so that the route can be easily travelled. (If the resulting order is the same as the current order, this option is invalid.)
 - ⑤ Inserts a new waypoint.
 - ⑥ Adds a new destination and changes the current destination to the last waypoint.

Changing the starting position

The starting position for route can be changed from the current position.

- 1 Press the MAP button and touch .
- 2 Touch [Route Planner] or [My Route].
- 3 Touch [Current GPS Position].
- 4 Touch [Set Start Point] or [Change Start Point] and then touch [OK].
- 5 Search for a location.
- 6 Touch [Set Start Point] or [Change Start Point].
- 7 Touch [Show Route] or [Continue Without Route].

The system starts route recalculation after [Show Route] is touched, and then the "Route Summary" screen appears. After [Start Navigation] is touched, your navigation system starts the route guidance.

After [Continue Without Route] is touched, the current position map appears.

Restoring the current position as the starting position

- 1 Press the MAP button and touch .
- 2 Touch [Route Planner] or [My Route].

- 3 Touch [Current GPS Position].
- 4 Touch [Back to GPS Position] and then touch [Delete Start Point].

The starting position for route calculation returns to the current position.

Adding waypoints

- 1 Press the MAP button and touch .
- 2 Touch [Add Waypoint].
- 3 Search for a location.
- 4 Touch [Select as Waypoint].

The route is recalculated, and the "Route Summary" screen appears. (When the waypoint is already set, the "My Route" screen appears. Touch [Show Route] and proceed to the next step.)

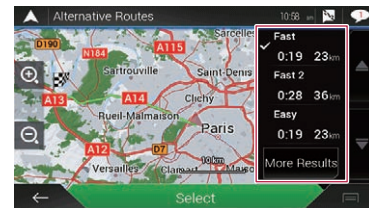
- 5 Touch [Start Navigation].
Your navigation system starts the route guidance.

Checking route alternatives

You can select another route and compare different route alternatives.

- 1 Press the MAP button and touch .
- 2 Touch [Detours & Alternatives].
- 3 Touch [Alternative Routes].
- 4 Touch any of the route calculate conditions.

You can see the approximate time required and total distance of selected route alternatives. Touch any of the route alternatives to see it on the map.



- ❑ If more than three route alternatives have been found, [More Results] appears. Touch [More Results] to show the other routes.

Checking and modifying the current route

- For information about route calculation conditions, refer to **Route Planning Method** on page 25

5 Touch [Select].

The selected route is applied as your current route.

Checking detour routes

You can check for detour routes that avoid the selected sections or streets, or that avoid the road ahead. You can also check for alternative routes.

1 Press the MAP button and touch .

2 Touch [Detours & Alternatives].

3 Touch one of the options.

● **Alternative Routes:**

Shows the alternative routes.

- Refer to *Checking route alternatives* on page 18

● **Avoid Special Sections:**

Shows the route avoiding certain sections. Touch the list item to select the section you want to avoid. The distance and time difference, suggested route, current route, and the section avoided are shown. Touch **[Accept]** to apply the suggested route.

● **Avoid Specific Road:**

Shows the route avoiding certain road. Touch the list item to select the road you want to avoid. Distance and time difference, suggested route, current route, section avoided are shown. Touch **[Accept]** to apply the suggested route.

● **Avoid Road Ahead:**

Shows the route avoiding the road ahead. Touch **[+]** or **[-]** to set the distance you want to avoid. Touch **[Avoid]** to apply the suggested route.

● **Restore Original Route:**

Cancels the route with avoidances and restores the previous route.

- ☐ The route set by **[Alternative Routes]** cannot be cancelled.

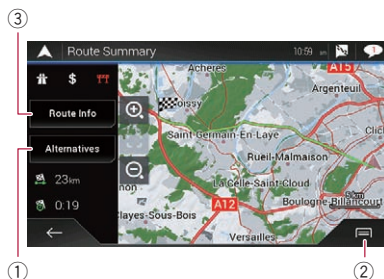
Checking route information and preferences

Once you set the route, you can check a summary of the current route.

1 Press the MAP button and touch .

2 Touch [Route Summary].

3 Touch one of the options.



The conditions of the displayed route is shown in the upper left by icon. The total length of the route and approximate required time for the route in the lower left.

- ☐ You can scroll the map by dragging the map.

① Shows alternative routes.

- Refer to *Checking route alternatives* on page 18

② Displays the shortcuts.

● **Route Preferences:**

Shows the route setting preferences. If you change the preferences, the route is recalculated.

● **Itinerary:**

Shows all transit points in detail. Touch a transit point to show its position on the map. If you touch **[Avoid]** on the map screen, the route is recalculated avoiding the transit point (as much as possible).

● **Save Route:**

Saves the displayed route. The saved route can be recalled later.

● **Places Along Route:**

Searches for POIs along the displayed route. Touch the POI to show the "Map Location" screen, and also set the POI as a waypoint.

● **Simulation:**

You can run a simulation of the navigation for the current route, as a demonstration.

- Refer to *Watching the simulation of the route* on page 19

③ Shows the information for a transit point on the route.

Touching the items allows you to see the location on the map. Touch **[Avoid]** and **[Accept]** to set the location as a location to avoid.

Cancelling the current route guidance

If you no longer need to travel to your destination, follow the steps below to cancel the route guidance.

1 Press the MAP button and touch .

2 Touch [Cancel Route] or [Delete Waypoint].

3 Touch one of the options.

If there are no waypoints on the route, touch **[Cancel Route]** to cancel the route.

If there are waypoints on the route, touch **[Cancel Route]** to cancel the route. Touch **[Delete Waypoint]** to delete only the nearest waypoint. In such case, the route is recalculated.

Watching the simulation of the route

You can run a simulation of the navigation for the current route, as a demonstration.

1 Set a route to your destination.

- Refer to *Searching for a destination* on page 14

2 Press the MAP button and touch .

3 Touch [Route Summary], and then touch .

4 Touch [Simulation].

The simulation starts from the starting point of the route, and using a realistic speed, it leads you through the whole recommended route.

- Touch **[Close]** to stop the simulation.

Registering and editing locations and routes

Storing a location in “Saved Location”

Storing your favourite locations in “**Saved Location**” allows you to save the time and effort used on re-entering this information. “**Saved Location**” can include your home location, workplace, and places you have already registered.

Storing your home and your workplace location

You can store one home location and one workplace location.

- 1 Press the MAP button and touch .
- 2 Touch [New Route], and then [Saved Location].
You can also display the “**Saved Location**” screen by touching  on the bottom of the screen when the navigation menu is displayed.
- 3 Touch [Home] or [Work] and then touch [OK].
☐ When you have already stored your home or workplace, touch [Home] or [Work] to show the location on the “**Map Location**” screen.
- 4 Search for a location.
➤ Refer to *Searching for a destination* on page 14
- 5 Touch [Add to Saved Locations].
The cursor position has been stored.

Storing your favourite locations

You can store a frequently visited location (such as a relative's home) to allow easy routing.

- 1 Press the MAP button and touch .
- 2 Touch [New Route], and then [Saved Location].
You can also display the “**Saved Location**” screen by touching  on the bottom of the screen when the navigation menu is displayed.
- 3 Touch [Add Location].
- 4 Search for a location.
➤ Refer to *Searching for a destination* on page 14
- 5 Touch [Add to Saved Locations].
- 6 Enter the name if needed and then touch .

The cursor position has been stored.

- ☐ In the on-screen keyboard, touching  or  enables you to store the location as your home or workplace location.

Editing stored locations

Stored locations can be edited.

Switching to the edit mode

- 1 Press the MAP button and touch .
- 2 Touch [New Route], and then [Saved Location].
- 3 Touch , and then touch [Edit].
The “**Select Location to Edit**” screen appears.

Renaming stored locations

- 1 Switch to the edit mode.
➤ Refer to *Switching to the edit mode* on page 20
- 2 Touch the item you want to rename and touch [Rename].
☐ “**Home**” and “**Work**” cannot be renamed. The location can be set again.
- 3 Enter the name and then touch .
- 4 Touch [Done].

Deleting stored locations

- 1 Switch to the edit mode.
➤ Refer to *Switching to the edit mode* on page 20
- 2 Touch the item you want to delete and touch [Delete].
☐ “**Home**” and “**Work**” cannot be deleted. The location can be set again.
- ☐ If you touch  and then touch [Delete All], all entries (including the home and workplace locations) can be deleted.

A message will appear asking you to confirm the deletion.

- 3 Touch [OK].
- 4 Touch [Done].

Storing a route in “Saved Routes”

Storing your favourite routes in “**Saved Routes**” allows you to save the time and effort used on re-entering this information.

- 1 Set a route to your destination.
➤ Refer to *Searching for a destination* on page 14
- 2 Press the MAP button and touch .
- 3 Touch [Route Summary], and then touch .
- 4 Touch [Save Route].
- 5 Enter the name if needed and then touch .

Editing the stored route

Stored routes can be edited.

Renaming stored routes

- 1 Press the MAP button and touch .
- 2 Touch [New Route], and then .
- 3 Touch [Saved Routes].
- 4 Touch , and then touch [Edit].
- 5 Touch the item you want to rename and touch [Rename].
- 6 Enter the name and then touch .
- 7 Touch [Done].

Deleting stored routes

- 1 Press the MAP button and touch .
- 2 Touch [New Route], and then .
- 3 Touch [Saved Routes].
- 4 Touch , and then touch [Edit].
- 5 Touch the item you want to delete and touch [Delete].
☐ If you touch  and then touch [Delete All], all entries can be deleted.
- 6 Touch [Delete].

Registering and editing locations and routes

Saving a location as an alert point

Important

The warning for road safety cameras (like speed cameras) is disabled when you are in certain countries where warnings for road safety cameras are prohibited. However, you are fully responsible for ensuring that this feature is legal in the country where you intend to use it.

You can save any map location (such as a school zone or railroad crossing) as an alert point.

- ❑ To use this function, activate the warnings beforehand and set the alert types.
 - ➔ Refer to "Warnings" settings on page 26

- 1 Press the MAP button.
- 2 Scroll the map and select a location.

The cursor appears at the selected point.

- 3 Touch [Map].
- 4 Touch [Add Alert Points].
- 5 Set the necessary parameters.

- **Alert Type:**
Sets the type of the alert point.
- **Speed Limit:**
Sets the speed limit for this alert point (if applicable).
- **Direction:**
Sets the direction from which you expect the alert to come from.

- 6 Touch [Save].

- ❑ In [Alert Type], speed camera alert cannot be selected when the cursor is placed on the map of France.

Editing the stored alert points

Stored alert points can be edited.

- 1 Press the MAP button.
- 2 Scroll the map and move the cursor over the stored alert point, and then touch [Map].
- 3 Touch [Edit Alert Points].
- 4 Set the necessary parameters.
 - If you touch [Map] and then touch [Delete], the selected alert point will be deleted.
- 5 Touch [Edit].

Receiving real-time traffic information (TMC)

The Traffic Message Channel (TMC) provides real-time traffic reports. If the navigation system is equipped with the TMC feature, you can check the traffic reports and information received.

- ❑ The online function in "Traffic" can be used if you connect an iPhone or a smartphone that has the **AVICSYN App** installed.
 - ➔ Be sure read *Expanding the use of the navigation functions* (page 29) before using the **AVICSYN** function.

Displaying the "Traffic Summary" screen

- 1 Press the MAP button and touch [Map].

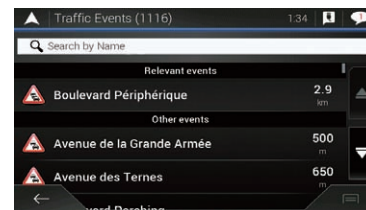
- 2 Touch [Traffic].

The "Traffic Summary" screen appears.

Viewing the traffic list

Traffic information is displayed onscreen in a list. This allows you to check how many traffic incidents have occurred, the locations, and the distance from your current position.

- 1 Display the "Traffic Summary" screen.
 - ➔ Refer to *Displaying the "Traffic Summary" screen* on page 21
- 2 Touch [Traffic Events].



A list with traffic information that has been received is shown. The list is sorted by distance from your current position. Places (street names) where incidents have occurred are displayed on the list.

Receiving real-time traffic information (TMC)

- ❑ If a route is set, relevant events for your current route are shown in the upper section of the list.
- ❑ Touching the desired item allows you to check its position on the map. Touch  or  to show the previous or next event.

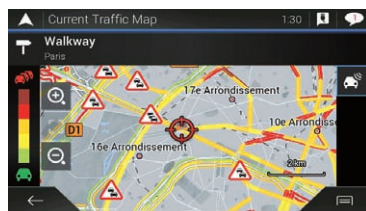
Checking the traffic incidents on the map

Traffic event information can be displayed on the map.

1 Display the "Traffic Summary" screen.

- ➔ Refer to *Displaying the "Traffic Summary" screen* on page 21

2 Touch [Traffic Map].



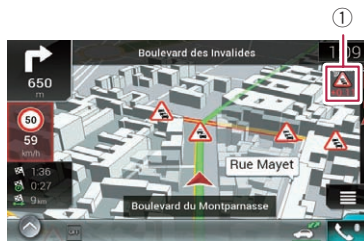
Road segments affected by traffic incidents are displayed in an alternate colour on the map, and small symbols above the road show the nature of the incident.

The traffic jam lines indicate the degree of the traffic jam by colour.

When traffic incidents occur on your route

The notification icon shows the status of traffic information reception.

1 Touch the relevant traffic event icon on the map.



① Traffic notification icon

	Indicates that there are no traffic incidents in your coverage area.
	Indicates that information on traffic incidents are being received.
	Indicates that there are no significant traffic incidents on your route.
	Indicates that there are significant traffic incidents on your route. The icon shows the type of the next traffic incident.

You can check the details of the traffic incidents. Touch the relevant event to display the location on the map.

Turning the traffic information on or off

The traffic information feature is turned on by default. To enable or disable the TMC feature, perform the following procedure.

- ❑ If you turn the traffic information feature off, [Traffic] on the navigation menu disappears.

1 Press the MAP button and touch .

2 Touch , and then touch [Settings].

3 Touch , and then touch [Traffic].

4 Touch [Traffic] to turn the switch on or off.

Checking useful information about your trip

Displaying the "Useful Information" menu

The "Useful Information" menu contains various information to support your driving.

- ❑ To use the online functions ("Parking", "Weather" and "Fuel Prices"), the appropriate content installation must be installed in the navigation system and a connection with an iPhone or a smartphone that has the **AVICSYNC App** installed must be established.
- ➔ Be sure read *Expanding the use of the navigation functions* (page 29) before using the **AVICSYNC** function.

1 Press the MAP button and touch .

2 Touch [Useful Information].

The "Useful Information" screen appears.

Information on each option in the "Useful Information" menu

- **Parking:**
Checks for car parks near your current location.
➔ Refer to the manual for **AVICSYNC** on our website
- **Fuel Prices:**
Displays recent fuel prices of petrol stations near the current location, along the current route, or in the town.
➔ Refer to the manual for **AVICSYNC** on our website
- **Weather:**
Checks the weather forecast for your current location, along your route, around your destination, as well as for your saved locations.
➔ Refer to the manual for **AVICSYNC** on our website
- **Where Am I?:**
Displays a special screen with information about the current position and a key to search for nearby emergency or roadside assistance services.
❑ To save the current position as a "Saved Location" destination, touch .
- ➔ Refer to *Storing a location in "Saved Location"* on page 20
- ❑ To check the country information of your current position, touch .
- **Help Nearby:**
Checks for POIs in your surroundings.
The preset search categories are as follows.
— **Car Repair:**
— **Health:**

Checking useful information about your trip

- **Police:**
- **Petrol Station:**
- **Country Information:**
 - Checks for useful driving information about the selected country (for example, speed limits and maximum blood alcohol level).
 - This information may not necessarily correspond to the actual regulations, etc. Utilize the information for your reference.
- **Trip Monitor:**
 - Checks the statistical data of your trips (for example, start time, end time, average speed, etc.).
 - ➔ Refer to *Recording your travel history* on page 23
- **GPS Information:**
 - Displays the GPS information screen with satellite position and signal strength information.
- **Fuel Consumption:**
 - You can estimate the fuel cost to your destination by entering the fuel consumption information in the navigation system.
 - ➔ Refer to *Calculating the fuel consumption* on page 24

Recording your travel history

Activating the trip logger enables you to record your driving history (hereinafter called “trip log”). You can review your trip log later.

- The trip logger is set so that it can be started manually by default. You can change the settings of this function in order to save the log automatically.
- ➔ Refer to **“Trip Monitor” settings** on page 28

Activating trip logger temporarily

One-time activation is useful if you want to create a log only for a particular trip.

- 1 **Display the “Useful Information” menu.**
 - ➔ Refer to *Displaying the “Useful Information” menu* on page 22
- 2 **Touch [Trip Monitor].**

A list of trip logs already recorded appears. A blank list appears if you have not recorded any trip logs yet.
- 3 **Touch [Start New Recording].**

The trip logger is activated. The touch key changes to **[Stop Recording]**. Touching **[Stop Recording]** allows you to deactivate the trip logger.

 - If there is not enough space in the built-in memory, the oldest trip log will be overwritten by the new one.

- If you want the system to always activate the trip logger whenever the GPS signal is available, turn on **“Enable Auto-Saving”**.
- ➔ Refer to *Setting the trip logger* on page 23

Browsing the trip log

- 1 **Record the trip log.**
 - 2 **Display the “Useful Information” menu.**
 - ➔ Refer to *Displaying the “Useful Information” menu* on page 22
 - 3 **Touch [Trip Monitor].**
 - To export all trip logs, touch **[Export All]**.
 - 4 **Touch any of the items to see the details.**
 - To display the trip log on the map, touch **[Visible on Map]** to tick the check box.
- Touching  allows you to view the shortcuts and enables you to use the following functions.
- **View on Map**
 - Shows the trip log on the map screen.
 - **Export Track Log:**
 - Exports the track log currently selected to an external storage device.

Setting the trip logger

- 1 **Record the trip log.**
- 2 **Display the “Useful Information” menu.**
 - ➔ Refer to *Displaying the “Useful Information” menu* on page 22
- 3 **Touch [Trip Monitor].**
- 4 **Touch  and then touch [Trip Monitor Settings].**
- 5 **Touch any of the items to change the settings.**
 - **Enable Auto-Saving:**
 - Sets whether automatic trip logging is activated or not.
 - **Save Track Log:**
 - Track logs, the sequence of the positions given by the GPS receiver, can be saved together with trip logs. You can activate the track logger whenever the trip logger is activated.
 - **“Trip Database Size”** indicates the current data size of the trip log (track log included).

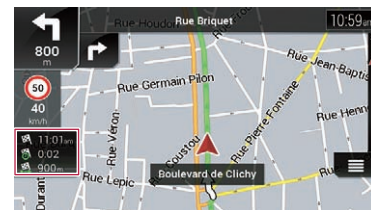
Editing a trip log

- 1 **Display the “Useful Information” menu.**
 - ➔ Refer to *Displaying the “Useful Information” menu* on page 22
- 2 **Touch [Trip Monitor].**
- 3 **Touch  and then touch [Edit].**
- 4 **Touch any of the items to edit.**
 - **Delete:**
 - Deletes the trip log.
 - **Rename:**
 - Renames the trip log.
 - **Change Colour:**
 - Changes the colour by selecting another colour from the colour table.
 - If you touch  and then touch **[Delete All]**, all entries can be deleted.
- 5 **Touch [Done].**

Using the Trip Computer mode

In the trip computer screen, the information received from the GPS receiver and your vehicle is displayed like a metre for a vehicle.

- 1 **Press the MAP button.**
- 2 **Touch the data field key.**



- If you touch **[Trip Summary]**, the details of the current trip are displayed. Touch **[Save Trip]** to store the current trip log.
- If you press the **MAP** button, you can return to the map screen.

Checking useful information about your trip

Calculating the fuel consumption

The fuel consumption monitor helps you keep track of the fuel consumption of your car even if you do not use the navigation system for all your journeys. Set the initial odometer value and then record the distance driven and the amount of fuel whenever you fill up your car. You can also set reminders for regular car maintenance.

These calculations are based only on the information that you provide and not on any data from the vehicle. The fuel mileage displayed is only a reference value, and does not guarantee that the fuel mileage displayed can be obtained.

Setting the initial odometer value

Before you use the fuel consumption feature, enter the initial odometer value from which you want to start measuring the mileage.

1 Display the “Useful Information” menu.

➔ Refer to *Displaying the “Useful Information” menu* on page 22

2 Touch [Fuel Consumption].

3 Touch [Initial Milometer Value].

4 Enter the initial odometer value and then touch .

The initial odometer value has been set.

Entering the fuel consumption information

To calculate the fuel consumption for the distance you have travelled, enter the distance driven and the amount of fuel whenever you fill up your car.

1 Display the “Useful Information” menu.

➔ Refer to *Displaying the “Useful Information” menu* on page 22

2 Touch [Fuel Consumption].

3 Touch [Add].

4 Touch [Current Milometer Value] and then enter the current odometer value.

5 Touch [Fuel Amount] to enter the amount of fuel pumped this time.

6 Touch [Fuel Price / Unit] to enter the fuel unit price this time.

7 Touch [Add].

8 Touch [Done].

☐ To delete an entry, touch  to display the shortcut for deletion.

Setting the car maintenance schedule

1 Display the “Useful Information” menu.

➔ Refer to *Displaying the “Useful Information” menu* on page 22

2 Touch [Fuel Consumption].

3 Touch .

4 Touch [Maintenance Schedule].

5 Touch [Add] or the one of entries.

6 Enter the name, date, and mileage for the reminder.

7 Touch [Done].

☐ To delete an entry, touch  to display the shortcut for deletion.

Customising preferences of the navigation

Customising the navigation settings

You can configure the navigation settings, and modify the behaviour of this system.

1 Press the MAP button and touch .

2 Touch , and then touch [Settings].

The “Settings” screen appears.

• Route Preferences:

Sets the type of vehicle you are driving, the road types used in route planning, and the route planning method.

➔ Refer to “Route Preferences” settings on page 25

• Sound:

Adjusts the different sound volumes and changes the voice guidance profile.

➔ Refer to “Sound” settings on page 26

• Warnings:

Enables or disables warnings and sets up the warning function.

➔ Refer to “Warnings” settings on page 26

• Navigation Map:

Fine-tunes the appearance of the map screen and adjusts how the software helps you navigate with different kinds of route-related information on the map screen.

➔ Refer to “Navigation Map” settings on page 27

• Regional:

Changes the voice guidance language, the application language, and measurement units.

➔ Refer to “Regional” settings on page 27

• Display:

Sets separate themes for daytime and nighttime use, adjusts the display backlight, and enables or disables menu animations.

➔ Refer to “Display” settings on page 28

• Traffic:

Enables or disables the traffic information feature.

➔ Refer to “Traffic” settings on page 28

• Weather:

Enables or disables the online weather forecast option and the automatic download of weather information.

➔ Refer to the manual for AVICSYN on our website

• Fuel:

Enables or disables the online fuel price option and sets up the fuel type.

➔ Refer to the manual for AVICSYN on our website

Customising preferences of the navigation

- **Trip Monitor:**
Turns automatic trip log saving on or off and checks the current size of the trip database.
➔ Refer to “**Trip Monitor**” settings on page 28
- **AVICSYNC**
Displays the connection method for AVICSYNC.
☐ The setting value is fixed. Use this product as it is.
- **Online Services:**
Enables or disables the connected services.
➔ Refer to “**Online Services**” settings on page 28
- **Start Configuration Wizard:**
Modifies the basic software parameters used during the initial setup process.
- **SyncTool:**
Starts the synchronisation tool, which makes it possible to update your maps.
➔ Refer to *Getting the map update* on page 29

Restoring the default settings

You can restore settings or recorded content to the default settings.

- 1 Press the MAP button and touch .
- 2 Touch , and then touch [Settings].
- 3 Touch .
- 4 Touch [Reset All Settings].
- 5 Touch [OK].

The recorded contents are cleared.

- ☐ If you touch [Factory Reset] on the shortcut, all data relevant to navigation (including the items in saved locations and histories) are deleted and all settings are reset to their factory defaults.

Information on each option of “Settings”

“Route Preferences” settings

Vehicle

You can set the type of vehicle you will be using on the route.

- ☐ The route is planned based on the selected vehicle type.
Route planning can also be configured to incorporate dimension, weight, and freight hazard restrictions for maps that contain such data.

To enhance the route accuracy, correctly select a vehicle type that is similar to the condition of your vehicle.

- **Car:**
 - Manoeuvre restrictions and directional constraints are taken into account when planning a route.
 - Roads are used only if access for cars is allowed.
 - Private roads and resident-only roads are used only if they are inevitable to reach the destination.
 - Walkways are excluded from routes.
 - **Emergency:**
 - All manoeuvres available at intersections are taken into account.
 - Directional constraints are taken into account in the same way as travel in the opposite direction is allowed at low speeds.
 - Only private roads that need to be used to access the destination are included.
 - Walkways are excluded from routes.
 - **Bus:**
 - Manoeuvre restrictions and directional constraints are taken into account when planning a route.
 - Roads are used only if access for buses is allowed.
 - Private roads, resident-only roads and walkways are excluded from routes.
 - **Taxi:**
 - Manoeuvre restrictions and directional constraints are taken into account when planning a route.
 - Roads are used only if access for taxis is allowed.
 - Private roads, resident-only roads and walkways are excluded from routes.
 - **Lorry:**
 - Manoeuvre restrictions and directional constraints are taken into account when planning a route.
 - Only roads that allow lorry access are included.
 - Private roads, resident-only roads and walkways are excluded from routes.
 - U-turns are not used in routes (turning around on a divided road is not considered a U-turn for the purpose of this system).
- ☐ To edit the name and estimated maximum speed of the selected vehicle profile, touch .
 - ☐ To add a new vehicle profile, touch [Add Profile]. Then select one of the vehicle types and set the name and estimated maximum speed.

Route Planning Method

You can change the route planning method. Route calculation can be optimised for different situations and vehicle types by changing the planning method. The route planning method types are as follows.

- **Fast**
Calculates a route with the shortest travel time to your destination as a priority. Usually the best selection for fast and standard cars.
- **Easy**
Results in a route with fewer turns and no difficult manoeuvres. With this option, you can make this system to take, for example, the motorway instead of a series of smaller roads or streets.
- **Short**
Calculates a route with the shortest distance to your destination as a priority. Usually practical for slower vehicles. Rarely practical to use to search for shorter routes for normal vehicles regardless of the speed.
- **Economical**
Calculates a route that is quick and saves fuel.

Navigation Mode

You can enable or disable off-road navigation.

- **On-road**
The route is planned towards the destination along the roads on the map.
- **Off-road**
The route is planned towards the destination in a straight line, not along the roads on the map.

Motorways

When this function is turned off, the route is calculated prioritising the avoidance of motorways.
This function is useful when you want to avoid motorways when you are driving a slow car or you are towing another vehicle.

Period Charge

When this function is turned off, the route is calculated prioritising the avoidance of toll roads.
This function is useful when you want to avoid toll roads with restricted time access that require you to purchase a separate pass or vignette to extend the length of time allotted for use.
☐ This option can be enabled or disabled separately from the pre-use toll road usage option.

Per-use Toll

When this function is turned off, the route is calculated prioritising the avoidance of per-use charged toll roads.
This function is useful when you want to avoid toll roads where there is a per-use charge.

Ferries

When this function is turned off, the route is calculated prioritising the avoidance of ferries.

Customising preferences of the navigation

Car Shuttle Trains

When this function is turned off, the route is calculated prioritizing the avoidance of car shuttle trains.

Car shuttle trains are used to transport vehicles for relatively short distances and they usually connect places that are not easily accessible by road.

Carpool Lanes

When this function is turned off, the route is calculated prioritizing the avoidance of carpool and HOV lanes.

- ☐ The navigation system avoids carpool and HOV lanes by default.

Unpaved Roads

When this function is turned off, the route is calculated prioritizing the avoidance of unpaved roads.

- ☐ The navigation system avoids unpaved roads by default.

“Sound” settings

- ☐ The following settings marked with an asterisk (*) are enabled only when a TTS-voice is selected for the voice language.

Voice

You can adjust the volume of the guidance sounds (verbal instructions).

Alert Beeps

You can adjust the volume of the non-verbal alert sounds (beeps).

Ding

You can turn off the attention tone that precedes the verbal instructions or adjust its volume.

Voice Guidance

You can enable or disable voice guidance.

- ☐ This function is enabled by default.

Announce Streets and Roads in Native Language Area*

You can select whether to have the navigation system announce the street names in the native language of the area, only the road numbers, or only the manoeuvres.

Announce Streets and Roads in Foreign Language Area*

You can select whether to have the navigation system read the street names in a foreign country, only the road numbers, or only the manoeuvres.

Early Indication of Manoeuvres

You can select whether you want an immediate announcement for the next manoeuvre or to receive the information when the manoeuvre is near.

Verbosity Level

You can set the verbosity of the voice instructions: how much information is given and how often the prompts occur.

- **Minimal:** Voice instructions are given once right before the next manoeuvre.
- **Medium:** Voice instructions are given once as the vehicle approaches the next manoeuvre and it is repeated right before the manoeuvre.
- **Verbose:** Voice instructions are given once relatively far from the next manoeuvre, it is repeated as the vehicle approaches the next manoeuvre, and it is repeated again right before the actual manoeuvre.

Announce Route Summary*

You can select whether to have the navigation system announce by voice a quick summary of the route whenever a route is calculated.

Announce Country Info*

When you cross country borders, this navigation system can read out information about the country you have just entered.

Announce Traffic Info*

You can select whether to have the navigation system announce by voice the traffic information whenever a traffic incident on your route is received.

Announce System Messages*

When a system message appears, this navigation system can read out the message.

“Warnings” settings

Important

- This system is able to warn you if you exceed the current speed limit. This information may not be available for your region (ask your local dealer), or may not be fully correct for all roads on the map.
- You are liable for ensuring that using this feature is legal in the country where you intend to use it.

Speed Warning

Warn When Speeding

You can select whether you want to receive visible and/or audible warnings.

The following alert types are available:

- **Audio and Visual:** When selected, audible and visible warnings will go off when you exceed the speed limit.
- **Visual:** When selected, visible warnings will go off when you exceed the speed limit.
- **Disabled:** When selected, no warnings will go off.

Speed Limit Always Visible

You can select whether you want to see the speed limit sign on the map all the time. When you set the speed limit to always be visible, the colour of the speed limit sign changes when you exceed the speed limit.

Outside Towns: ***% of the Speed Limit

You can receive a warning when you reach the set percentage of the speed limit in rural areas.

Within Towns: ***% of the Speed Limit

You can receive a warning when you reach the set percentage of the speed limit in urban areas.

Alert Points

This setting allows you to receive a warning when approaching alert points like school zones or railroad crossings.

- 🔗 Refer to *Setting the alert point warnings* on page 28

Warning Road Signs

Maps may contain driver alert information. Touch this key to turn on or off these warnings and to set the distance from the hazard to receive the warning at. These can be set individually for the different warning types.

Customising preferences of the navigation

“Navigation Map” settings

Map Display

You can see the effect when you change a setting.

- **Viewpoint**

You can adjust the basic zoom and tilt levels to your needs. Some preset levels are available. If you select “**Manual**”, you can store adjusted map scales and view angles.

- **Colour Mode**

You can switch between daytime and nighttime colour modes or let the software switch between the two modes automatically a few minutes before sunrise and a few minutes after sunset.

- **Day Map Colour**

You can select the colour scheme used in the daytime map.

- **Night Map Colour**

You can select the colour scheme used in nighttime map.

- **Landmarks**

This setting shows or hides 3D landmarks which are 3D artistic or block representations of prominent or well-known objects.

- ☐ **F980DAB/F980BT/F9880DAB/F9880BT**

This function becomes effective only when the additional map data is installed.

- **Buildings**

This setting shows or hides 3D city models which are 3D artistic or block representations of complete city building data containing actual building sizes and actual positions on the map.

- ☐ **F980DAB/F980BT/F9880DAB/F9880BT**

This function becomes effective only when the additional map data is installed.

- **3D Terrain**

This setting shows or hides the 3D elevation of the surrounding terrain.

- **Track Logs**

You can turn on or off track log saving which saves the sequence of the locations you go through on your journeys.

- **Place Markers**

You can select which POI icons to show on the map while navigating.

- ☐ When a large number of POI icons exist on a map display, maps and POI icons become hard to see. To maintain map and POI visibility, reduce the displayed categories as much as possible.

Data Fields

You can choose to have different values displayed for when navigating a route to a select destination and for when just cruising around without any particular destination.

☞ Refer to *Browsing the data field* on page 14
“**First**”, “**Second**” and “**Third**” selects items displayed in the data fields shown when the route exists. “**Without Route**” selects the items displayed in the data fields shown when a route does not exist.

Route Progress Bar

You can turn on the route progress bar to display the current route as a straight line located on the right side of the map. The arrow represents your current position and moves up the line as you travel along the route.

Offer Motorway Services

You may need to stop by a petrol station or a restaurant during your journey.

☞ Refer to *Frequently shown route events* on page 13

Services Displayed

You can select the service types displayed for the motorway exits or service stations. Choose from the POI categories.

Automatic Overview

When selected, the map zooms out to show an overview of the surrounding area if the next route event (manoeuvre) is far. When you get close to the event, the map returns to the normal map view.

Signposts

Whenever adequate information is available, lane information similar to the real ones on road signs above the road is displayed at the top of the map. You can turn this feature on or off.

Junction View

If you are approaching a motorway exit or a complex intersection and the necessary information is available, the map is replaced with a 3D view of the junction.

Tunnel View

When entering tunnels, the surface roads and buildings can be distracting. This feature shows a graphic picture of a tunnel instead of the map. A top-down overview of the tunnel and remaining distance are also displayed.

Offer Congestion Detour on Highways

When you slow down while driving on a motorway due to a traffic jam, this navigation system offers you a detour using the next exit. The message shows you the distance to the exit and the difference in the distance and estimated time compared to the original route. You can choose from one of the following options:

- Touch [**Dismiss**] or just ignore the message if you want to keep the original route.
- Touch [**Preview**] to see an overview of the original route and the detour to make the decision. You can accept the detour as shown in the preview, or increase the motorway segment bypassed before accepting.
- Turn to the suggested new direction and the route will be automatically recalculated.

Offer Real Time Alternative Routes

Alternative routes can be suggested when driving on normal roads. This navigation system will select a different turn in the upcoming intersection and offer you a different route for the next section of the route. You cannot, however, modify the offered detour.

Offer Parking Around Destination

Parking at the destination may not be easy to find in city areas. As you approach the destination, this navigation system can offer parking category places near your destination. Touch  to open a top-down map with the destination and the offered parking places. The route is calculated by selecting one of the parking places.

Offer Hints Upon Detour

If you leave the recommended route and suddenly exit the motorway, this navigation system offers different alternatives near the exit like petrol stations or restaurants. Also, if there are avoidable parts of the original route ahead (like a tunnel, a toll road or a ferry), you will find them in the list in case you want to bypass them with the help of this navigation system.

“Regional” settings

Language

This key displays the current language of the user interface. By touching the key, you can select a new language from the list of available languages. This system will restart if you change this setting.

Voice Language

This key displays the current voice guidance profile. By touching the key, you can select a new voice guidance language from the list of available languages and speakers. Touch any of these keys to hear a sample voice prompt.

Units and Formats

You can set the various units to be used by this system.

Customising preferences of the navigation

- ❑ This system may not support all the listed units in some voice guidance languages.

- **Distance**
The unit of distance can be changed.
- **Fuel Economy**
The unit of fuel mileage can be changed.
- **Weight**
The unit of weight can be changed.
- **Temperature**
The unit of temperature can be changed.
- **Coordinate Display Format**
The format of the coordinates can be changed.
- **Currency**
The currency unit can be set.

Time Zone

By default, the time zone is taken from the map information and adjusted according to your current location.

- **Automatic Time Zone**
The time zone setting changes automatically.
 - **Manual Time Zone**
The present setting value for the time difference and daylight saving time that you set are used.
 - **Manual Time Zone if Auto Unavailable**
The time zone setting changes automatically if automatic change is available. Otherwise, the present setting value that you set is used.
 - **Manual Time Zone in Current Zone**
The present setting value that you set are used in the current time zone. If your vehicle moves to another time zone, the time zone setting changes automatically.
- ❑ If a setting other than "Automatic Time Zone" is selected, "Time Zone" (the option to set the time difference manually) and "Daylight Saving Time" (the option to turn on or off daylight saving time) can also be set.

"Display" settings

Menu Animations

When animation is turned on, the keys on the menus and keyboard screens appear in an animated way. Screen transitions are also animated.

Day Skin Theme

You can select the style and colours of the navigation menu used in the daytime.

Night Skin Theme

You can select the style and colours of the navigation menu used in the nighttime.

"Traffic" settings

Traffic

You can set to enable or disable the TMC receiver that can receive real-time traffic information.

Data Source

You can select what data source you want to use for receiving real-time traffic information. [Online] is available only if the device is enabled.

Use Traffic Info

You can select whether to have traffic incidents be taken into consideration when the route is calculated.

Show Traffic Info

You can select whether to show icons relevant to traffic incidents and lines indicating the traffic flow on the map.

- **Off**
No traffic icons or lines indicating the traffic flow are shown.
- **Colour**
Only the line relevant traffic incidents are shown on the map.
- **Colour And Icon**
Icons for the relevant traffic incidents and lines indicating the traffic flow are shown on the map.

Show Free Traffic Flow As Well

You can select whether to receive information on smooth traffic flow.

Offer Detour if it Saves at Least

You can set the minimum time to be saved when having the system suggest a detour route. If the estimated time saved by the planned detour avoiding the traffic incidents is more than the set time, the system suggests the new detour route. Otherwise, the new route is not suggested.

Confirm Detours Manually

You can enable or disable the manual confirmation of every recalculation.

"Trip Monitor" settings

Enable Auto-Saving

☞ Refer to *Setting the trip logger* on page 23

Save Track Log

☞ Refer to *Setting the trip logger* on page 23

"Online Services" settings

You can use the "Online Services" settings to enable or disable connected online features.

☞ Refer to *Expanding the use of the navigation functions* on page 29

Online Traffic

You can enable or disable the online traffic service.

Online Weather

You can enable or disable the online weather forecast service.

Online Parking

You can enable or disable the online parking service.

Online Fuel Prices

You can enable or disable the online fuel price service.

Online Search

You can enable or disable the online search service.

Setting the alert point warnings

Important

The warning for road safety cameras (like speed cameras) is disabled when you are in certain countries where warnings for road safety cameras are prohibited. However, you are fully responsible for ensuring that this feature is legal in the country where you intend to use it.

You can set an alert for the different alert point categories, individually.

- 1 Press the MAP button and touch .
- 2 Touch , and then touch [Settings].

Customising preferences of the navigation

3 Touch [Warnings].

4 Touch [Alert Points].

5 Touch [Alert Point Warnings] to turn it on.

6 Touch the item you want to set.

● Alert Types

Sets the type of alert point.

● Speed Camera Types

Sets the type of speed camera.

- ☐ When you are driving in France, [Speed Camera Types] is not available and [Dangerous Zone (HVA)] becomes available instead. If [Dangerous Zone (HVA)] is set to on, alert points that you set are also alerted as dangerous zones. You can also set the distance of the pre-alert zone in [Pre-Alert Zone] and turn the sound alert on or off in [Sound alert].

7 Touch any of the items to change the setting.

8 Touch [Warning Type] and then touch one of the options.

The following alert types are available:

● Disabled:

The system does not warn you of the alert points for this category.

● Audio and Visual:

You will receive audible and visible warnings while you are approaching the points in this category.

● Visual:

You will receive a visible warning while you are approaching the points in this category.

- ☐ If you select "Audio and Visual" in the warning type setting, you can change the reception timing of the audio alert. If you select "Only When Speeding", the audio alert is only played when you exceed the given speed limit. If you select "When Approaching", the audio alert is always played when approaching one of these alert points. In order to draw your attention, the alert is different when you exceed the speed limit.

Getting the map update

You can update existing content, purchase additional maps and activate extra services on your product. To update the content, download the update on your USB memory storage by using the computer to which the Navixtras Toolbox is installed. Then, transfer the data from connected USB memory storage to your navigation system by using "SyncTool" on this product.

- ☐ For details, access the following URL and refer to "HOW TO UPDATE?" GUIDE.

<http://pioneer.naviextras.com>

Expanding the use of the navigation functions

You can expand the use of the navigation functions to iPhone or smartphones if you connect an iPhone or a smartphone (Android) that has the **AVICSYNC App** installed.

Be sure to read before you use AVICSYNC function

ⓘ Important

- Premium services for AVICSYNC require a paid subscription in order to be used, and not all services are available in all countries. Please refer to our website for more details.
- Please be aware that you may be charged additional roaming charges by your cellular provider if you use connected services while abroad.
- If the Data Plan for your iPhone or smartphone (Android) does not provide for unlimited data usage, additional charges from your carrier may apply for accessing app-based connected content via networks other than Wi-Fi.
- The information which is sent by content provider, such as search results, regulations, prices, etc. may not necessarily correspond to the actual condition. Utilise the information for your reference.
- To ensure compatibility, always use the latest version of the **AVICSYNC App**.
- If the downloaded data is large, it may take some time for the data to be transferred to your in-car navigation system via the **AVICSYNC App**. In such cases, you can also synchronize the content using Navixtras Toolbox on your computer and the "SyncTool" menu of the in-car navigation instead.

Limitations:

- Access to app-based connected content will depend on the availability of cellular and/or Wi-Fi network coverage for the purpose of allowing your smartphone to connect to the Internet.
- Service availability may be geographically limited to the region. Consult the connected content service provider for additional information.
- Ability of this product to access connected content is subject to change without notice and could be affected

by any of the following: compatibility issues with future firmware versions of smartphone; compatibility issues with future versions of the connected content application(s) for the smartphone; changes to or discontinuation of the connected Content application(s) or service by its provider.

- Pioneer is not liable for any issues that may arise from incorrect or flawed app-based content.
- The content and functionality of the supported applications are the responsibility of the App providers.

What is the AVICSYNC App?

The **AVICSYNC App** is a dynamic companion app that you can use to connect your iPhone or smartphone to a compatible Pioneer navigation system.

Once linked, the navigation system communicates with your iPhone or smartphone to share information such as contacts, navigation history, planned routes, POI favourites, and even where you parked your vehicle.

With the **AVICSYNC App**, your navigation receiver can also access Premium connected services such as real-time local search and weather data lookup to ensure that you'll have all the information you need to reach your desired destination.

As new mapping data becomes available, you can use the **AVICSYNC App** to review, purchase, download, and transfer updated mapping content directly to the compatible Pioneer navigation system.

In addition to augmenting your Pioneer in-dash navigation experience, **AVICSYNC App** also works as a standalone navigation app. This means that you'll always have access to Pioneer's accurate turn-by-turn navigation, even when you're not in your vehicle.

Access our website to check further details for the **AVICSYNC App**.

<http://www.pioneer.eu/avicsync>

- ☐ To use the **AVICSYNC App** as a standalone navigation app, a periodical connection between your in-car navigation system and an iPhone or a smartphone (Android) that has the **AVICSYNC App** installed is required.

Compatibility and connectivity

You need to install the free **AVICSYNC App** to your iPhone or smartphone (Android). To use the **AVICSYNC App** function, both iPhone or smartphone (Android) compatibility with the **AVICSYNC App** and connectivity with the navigation system are required.

Customising preferences of the navigation

AVICSYNC compatibility

AVICSYNC is available for the following models.

- Depending on the software version of the iPhone and Android, it may not be compatible with this product. For latest compatibility with this product and **AVICSYNC App**, refer to the information on our website.

iPhone models

- iPhone 6 Plus: iOS 8.x
- iPhone 6: iOS 8.x
- iPhone 5s: iOS 7.x, 8.x
- iPhone 5c: iOS 7.x, 8.x
- iPhone 5: iOS 7.x, 8.x
- iPhone 4s: iOS 7.x, 8.x
- iPhone 4: iOS 6.x

Smartphone (Android) models

SAMSUNG

- Galaxy Grand Prime: Android 4.4.4
- Galaxy S2: Android 4.1.2
- Galaxy S3: Android 4.1.2, 4.3
- Galaxy S4: Android 4.2.2, 4.4.2
- Galaxy S5: Android 4.0.3
- Galaxy S6: Android 5.0.2
- Galaxy Note II: Android 4.1.1
- Galaxy Note III: Android 4.4.2
- Galaxy Tab 2: Android 4.0.3
- Galaxy Tab 3: Android 4.2.2

LG

- Nexus 5: Android 4.4.2, 4.4.4, 5.0

ASUS

- Nexus 7 (2013): Android 4.3

Motorola

- Moto G: Android 4.4.4

Preparations before using the AVICSYNC function

- 1 **Download the AVICSYNC App from the App Store or Google Play and install the app to your iPhone or smartphone (Android).**

To find **AVICSYNC App**, access the App Store or Google Play and enter "AVICSYNC" in the search box.

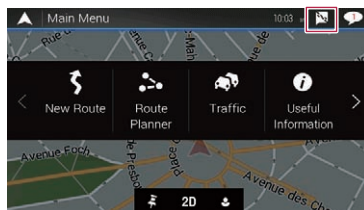
- 2 **Start the AVICSYNC App on your iPhone or smartphone (Android).**

- 3 **Connect your iPhone or smartphone (Android) to the navigation system via Bluetooth or USB cable connection.**

- For details of the Bluetooth connection, refer to *Bluetooth® connection* on page 30.
- For details of the USB connections, refer to the Installation Manual.

- 4 **Press the MAP button and touch [≡].**

- 5 **Touch [📶] on the navigation menu.**



- 6 **Touch [Associate New Phone].**

- 7 **Touch the iPhone or smartphone (Android) that you want to associate with the navigation system and then touch [Associate].**

- 8 **Accept the association on your iPhone or smartphone (Android).**

Once the association is established, your iPhone or smartphone (Android) is automatically associated when you connect your iPhone or smartphone (Android) to the navigation system.

- 9 **Purchase connected services via the AVICSYNC App.**

- 10 **Display the navigation menu and then touch [Settings].**

- 11 **Touch [Online Services].**

- 12 **Touch the service that you want to activate.**

The menus for the connected service are activated.

- For details on the operations and features of the **AVICSYNC**, refer to the manual on our website.

Bluetooth® connection

Displaying the "Bluetooth" screen

- 1 **Press the [≡] button.**

- 2 **Touch [📶], and then [📶].**

Registering your Bluetooth devices

- 1 **Activate the Bluetooth wireless technology on your devices.**

- 2 **Display the "Bluetooth" screen.**

- Refer to *Displaying the "Bluetooth" screen* on page 30

- 3 **Touch [Connection].**

- 4 **Touch [📶].**

The system searches for Bluetooth devices waiting for a connection and displays them in the list if a device is found.

- 5 **Touch the Bluetooth device name.**

After the device is successfully registered, a Bluetooth connection is established by the system. Once the connection is established, the device name is displayed on the list.

- If three devices are already paired, "Memory Full" is displayed. Delete a paired device first.

- Refer to *Deleting a registered device* on page 31

- If your device supports SSP (Secure Simple Pairing), a six-digit number appears on the display of this product. Touch [Yes] to pair the device.

- If a PIN code input is required, enter a PIN code. (The default PIN code is "0000".)

- Refer to *Entering the PIN code for Bluetooth wireless connection* on page 31

- The Bluetooth connection can be also made by detecting this product from the Bluetooth device. Before registration, make sure that "Visibility" in the "Bluetooth" menu is set to "On". For details on a Bluetooth device operations, refer to the operating instructions supplied with the Bluetooth device.

- Refer to *Switching visibility* on page 31

Bluetooth® connection

Setting Bluetooth device auto connection

This function connects the last connected Bluetooth device to this product with the Hands-Free Profile automatically as soon as the devices is less than a few metres apart. The default setting is "On".

1 Display the "Bluetooth" screen.

➤ Refer to *Displaying the "Bluetooth" screen* on page 30

2 Touch [Auto Connect] to switch "On" or "Off".

Deleting a registered device

⚠CAUTION

Never turn this product off while the paired Bluetooth device is being deleted.

1 Display the "Bluetooth" screen.

➤ Refer to *Displaying the "Bluetooth" screen* on page 30

2 Touch [Connection].

3 Touch .

4 Touch [Yes].

Connecting a registered Bluetooth device manually

Connect the Bluetooth device manually in the following cases:

- Two or more Bluetooth devices are registered, and you want to manually select the device to be used.
- You want to reconnect a disconnected Bluetooth device.
- Connection cannot be established automatically for some reason.

1 Activate the Bluetooth wireless technology on your devices.

2 Display the "Bluetooth" screen.

➤ Refer to *Displaying the "Bluetooth" screen* on page 30

3 Touch [Connection].

4 Touch the name of the device.

- To disconnect the device, touch the name of the connected device in the list.

Switching visibility

This function sets whether or not to make this product visible to the other device.

The default setting is "On".

1 Display the "Bluetooth" screen.

➤ Refer to *Displaying the "Bluetooth" screen* on page 30

2 Touch [Visibility] to switch "On" or "Off".

Entering the PIN code for Bluetooth wireless connection

To connect your Bluetooth device to this product, you need to enter a PIN code.

The default PIN code is "0000".

1 Display the "Bluetooth" screen.

➤ Refer to *Displaying the "Bluetooth" screen* on page 30

2 Touch [PIN Code Input].

3 Touch [0] to [9] to input the pin code (up to 8 digits).

4 Touch .

Displaying the device information

1 Display the "Bluetooth" screen.

➤ Refer to *Displaying the "Bluetooth" screen* on page 30

2 Touch [Device Information].

The device name and address of the Bluetooth device on this product are displayed.

Clearing the Bluetooth memory

⚠CAUTION

Never turn this product off while the Bluetooth memory is being cleared.

1 Display the "Bluetooth" screen.

➤ Refer to *Displaying the "Bluetooth" screen* on page 30

2 Touch [Bluetooth Memory Clear].

3 Touch [Clear].

4 Touch [OK].

Updating Bluetooth software

This function is used to update this product with the latest Bluetooth software. For details on Bluetooth software and updating, refer to our website.

- This setting is available only when you stop your vehicle in a safe place and apply the handbrake.
- The source is turned off and the Bluetooth connection is disconnected before the process starts.
- You need to store the version update file to the USB storage device in advance.

⚠CAUTION

Never turn this product off and never disconnect the phone while the software is being updated.

1 Connect the USB storage device stored the version update file to this product.

➤ Refer to *Plugging and unplugging a USB storage device* on page 6

2 Display the "Bluetooth" screen.

➤ Refer to *Displaying the "Bluetooth" screen* on page 30

3 Touch [BT Software Update].

4 Touch [Start].

Follow the on-screen instructions to finish updating the Bluetooth software.

Displaying the Bluetooth software version

If this product fails to operate properly, you may need to consult your dealer for repair.

In such cases, perform the following procedure to check the software version on this product.

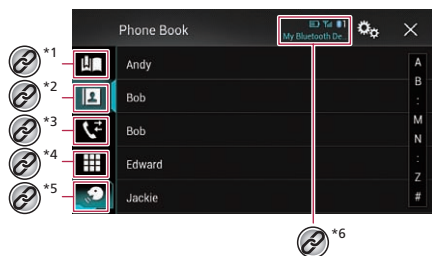
1 Display the "Bluetooth" screen.

➤ Refer to *Displaying the "Bluetooth" screen* on page 30

2 Touch [Bluetooth Version Information].

The version of this product's Bluetooth module appears.

Hands-free phoning



- *1 Switches to the preset dial screen.
➤ Refer to *Using the preset dial lists* on page 32
- *2 Switches to the phone book list.
➤ Refer to *Calling a number in the phone book* on page 32
- *3 Switches to the missed, received and dialed call lists.
➤ Refer to *Dialling from the history* on page 32
- *4 Switches the mode to enter the phone number directly.
➤ Refer to *Direct dialling* on page 32
- *5 Switches to the voice recognition function.
➤ Refer to *Using the voice recognition function* on page 33
- *6 The following items are displayed.
 - Name of the current mobile phone
 - List number of the current mobile phone
 - Indicates that a Bluetooth telephone is connected.
 - Reception status of the current mobile phone
 - Battery status of the current mobile phone

To use this function you need to connect your cellular phone to this product via Bluetooth in advance.

- Refer to *Bluetooth® connection* on page 30
- ❑ When the system language is set to Russian, **ABC** appears. If you want to change the character, touch the key repeatedly until the desired character appears.

CAUTION

For your safety, avoid talking on the phone as much as possible while driving.

Displaying the phone menu screen

- 1 Press the button.
- 2 Touch .

Making a phone call

You can make a phone call in many different ways.

- ❑ To end the call, touch .

Direct dialling

- 1 **Display the phone menu screen.**
➤ Refer to *Displaying the phone menu screen* on page 32
- 2 Touch .
- 3 Touch the number keys to enter the phone number.
- 4 Touch to make a call.
The dial screen appears and dialling starts.

Calling a number in the phone book

- ❑ The contacts on your phone will be automatically transferred to this product when the phone is connected.

- 1 **Display the phone menu screen.**
➤ Refer to *Displaying the phone menu screen* on page 32
- 2 Touch .
- 3 Touch the desired name on the list.
- 4 Touch the phone number.
The dial screen appears and dialling starts.

Dialling from the history

- 1 **Display the phone menu screen.**
➤ Refer to *Displaying the phone menu screen* on page 32
- 2 Touch .
- 3 Touch the item to switch the history list.
The following items are available:
 - : Received call list
 - : Dialed call list
 - : Missed call list

- 4 Touch the desired entry on the list to make a call.

The dial screen appears and dialling starts.

Using the preset dial lists

Registering a phone number

You can easily store up to six phone numbers per device as presets.

- 1 **Display the phone menu screen.**
➤ Refer to *Displaying the phone menu screen* on page 32
- 2 Touch or .
- ❑ On the "Phone Book" screen, touch the desired name to display the contact's phone number.
- 3 Touch .

Dialling from the preset dial list

- 1 **Display the phone menu screen.**
➤ Refer to *Displaying the phone menu screen* on page 32
- 2 Touch .
- 3 Touch the desired entry on the list to make a call.

The dial screen appears and dialling starts.

Deleting a phone number

- 1 **Display the phone menu screen.**
➤ Refer to *Displaying the phone menu screen* on page 32
- 2 Touch .
- 3 Touch .
- 4 Touch [Yes].

Receiving a phone call

- ❑ To end the call, touch .
- 1 Touch to answer the call.
 - If you touch while getting a call waiting, you can switch to the talking person.
 - Touch to reject the call.

Hands-free phoning

Minimising the dial confirmation screen

- ☐ The dial confirmation screen cannot be minimised on the AV operation screen.
- ☐ AV sources cannot be selected even if the dial confirmation screen is minimised while talking on the phone or receiving an incoming call.

1 Touch .

- Touch  to display the dial confirmation screen again.

Changing the phone settings

Setting auto answering

You can select whether or not to answer a call automatically. The default setting is "Off".

1 Display the "Bluetooth" screen.

- ➡ Refer to *Displaying the "Bluetooth" screen* on page 30

2 Touch [Auto Answer] to switch "On" or "Off".

Switching the ring tone

You can select whether or not to use this product's ring tone. The default setting is "On".

1 Display the "Bluetooth" screen.

- ➡ Refer to *Displaying the "Bluetooth" screen* on page 30

2 Touch [Ring Tone] to switch "On" or "Off".

Inverting names in the phone book

You can use this function to change the order of the first and last names in the phone book.

1 Display the "Bluetooth" screen.

- ➡ Refer to *Displaying the "Bluetooth" screen* on page 30

2 Touch [Invert Name].

3 Touch [Yes].

Setting the private mode

During a conversation, you can switch to private mode (talk directly on your mobile phone).

1 Touch or to turn private mode on or off.

Adjusting the other party's listening volume

This product can be adjusted to the other party's listening volume.

- ☐ Settings can be stored for each device.

1 Touch to switch between the three volume levels.

Using the voice recognition function

You can use the voice recognition function of iPhone or smartphone.

- ☐ When an iPhone running iOS 6.1 or higher is used, Siri Eyes Free Mode is available with this product.
- ☐ For using this function with a smartphone, the device must be compatible with **Android Auto**. For using the voice recognition function with a smartphone, launch **Android Auto** beforehand.
 - ➡ Refer to *Using Android Auto* on page 51

1 Display the phone menu screen.

- ➡ Refer to *Displaying the phone menu screen* on page 32

2 Touch .

The voice recognition function launches and the voice control screen appears.

- ☐ You can also launch the voice recognition function by pressing and holding the  button.

Notes for hands-free phoning

General notes

- Connection to all mobile phones featuring Bluetooth wireless technology is not guaranteed.
- The line-of-sight distance between this product and your mobile phone must be 10 metres or less when sending and receiving voice and data via Bluetooth technology. However, the actual transmission distance may be shorter than the estimated distance, depending on the usage environment.
- With some mobile phones, the ring sound may not be output from the speakers.
- If private mode is selected on the mobile phone, hands-free phoning may be disabled.

Registration and connection

- Mobile phone operations vary depending on the type of mobile phone. Refer to the instruction manual that came with your mobile phone for detailed instructions.
- When phone book transfer does not work, disconnect your phone and then perform pairing again from your phone to this product.

Making and receiving calls

- You may hear a noise in the following situations:
 - When you answer the phone using the button on the phone.
 - When the person on the other end of the line hangs up the phone.
- If the person on the other end of the line cannot hear the conversation due to an echo, decrease the volume level for hands-free phoning.
- With some mobile phones, even after you press the accept button on the mobile phone when a call comes in, hands-free phoning may not be performed.
- The registered name will appear if the phone number is already registered in the phone book. When the same phone number is registered under different names, only the phone number will be displayed.

The received call and the dialled number histories

- You cannot make a call to the entry of an unknown user (no phone number) in the received call history.
- If calls are made by operating your mobile phone, no history data will be recorded in this product.

Phone book transfers

- If there are more than 800 phone book entries on your mobile phone, not all entries may download completely.
- Depending on the phone, this product may not display the phone book correctly.
- If the phone book in the phone contains image data, the phone book may not be transferred correctly.

Setup for iPod / iPhone or smartphone

- Depending on the mobile phone, phone book transfer may not be available.

When using an iPod / iPhone or a smartphone with this product, configure the settings of this product according to the device to be connected.

This section describes the settings required for each device.

The basic flow of iPod / iPhone or smartphone setup

- ① Select the method for connecting your device.
 - ➡ Refer to *Setting the device connection method* on page 34
- ② Connect your device to this product.
 - ➡ Refer to the Installation Manual.
- ③ If necessary, connect your device to this product via Bluetooth connection.
 - ➡ Refer to *Bluetooth® connection* on page 30

Setting the device connection method

To use the iPhone or smartphone on this product, select the method for connecting your device.

Settings are required according to the connected device.

1 Display the “System” setting screen.



2 Touch [Input/Output Settings].

3 Touch [Smartphone Setup].

4 Configure the following settings.

- **Device:** Select the device to be connected.
- **Connection:** Select the connection method.
 - ➡ Refer to *Information on the connections and functions for each device* on page 35
- The setting will change after the following processes are automatically executed.
 - The source is turned off.
 - **AppRadio Mode** is exited.
 - The smartphone connection (USB and Bluetooth) is disconnected.
- The setting may not be operable right after it is changed.

iPod / iPhone compatibility

This product supports only the following iPod / iPhone models and iPod / iPhone software versions. Others may not work correctly.

- iPhone 4, 4s, 5, 5c, 5s, 6, 6 Plus: iOS 7.0 or later.
- iPhone 3GS: iOS 6.0.1
- iPod touch (4th, 5th generation): iOS 6.0.1
- iPod touch (3rd generation): iOS 5.1.1
- iPod touch (2nd generation): iOS 4.2.1
- iPod classic 160GB (2009): Ver. 2.0.4
- iPod classic 160GB (2008): Ver. 2.0.1
- iPod classic 80GB: Ver. 1.1.2
- iPod nano (7th generation)
- iPod nano (6th generation): Ver. 1.2
- iPod nano (5th generation): Ver. 1.0.2
- iPod nano (4th generation): Ver. 1.0.4
- iPod nano (3rd generation): Ver. 1.1.3
- You can connect and control an iPod / iPhone compatible with this product by using separately sold connector cables.
- Operation methods may vary depending on the iPod / iPhone model and the software version.
- Depending on the software version of the iPod / iPhone, it may not be compatible with this product.
- ➡ For details about iPod / iPhone compatibility with this product, refer to the information on our website.

This manual applies to the following iPod / iPhone models.

iPod / iPhone with a 30-pin connector

- iPhone 3GS, 4, 4s
- iPod touch 2nd, 3rd, 4th generation
- iPod classic 80GB, 160GB
- iPod nano 3rd, 4th, 5th, 6th generation

iPod / iPhone with a Lightning connector

- iPhone 6, 6 Plus
- iPhone 5, 5c, 5s
- iPod touch 5th generation
- iPod nano 7th generation

Android™ device compatibility

- Operation methods may vary depending on the Android device and the software version of the Android OS.
- Depending on the version of the Android OS, it may not be compatible with this product.
- Compatibility with all Android devices is not guaranteed.
- ➡ For details about Android device compatibility with this product, refer to the information on our website.

Setup for iPod / iPhone or smartphone

Information on the connections and functions for each device

The settings and cables required for connecting each device, and the available sources are as follows.

iPod / iPhone with a 30-pin connector

Device connection method		When connecting via Bluetooth	When connecting via CD-IU201V (sold separately)	When connecting via CD-IU201S (sold separately)
Smartphone Setup	Device	iPhone/iPod	iPhone/iPod	iPhone/iPod
	Connection	Bluetooth	USB1	USB1
Bluetooth connection		Bluetooth connection is required.	—	—
Connection requirement		—	Connect to USB port 1 for using AVICSYNC App .	Connect to USB port 1 for using AppRadio Mode or AVICSYNC App .
Available sources	iPod (audio)	—	✓	✓
	iPod (video)	—	✓	✓
	AppRadio Mode	—	—	✓
	AVICSYNC App	✓	✓	✓

iPod / iPhone with a Lightning connector

Device connection method		When connecting via Bluetooth	When connecting via CD-IU52 (sold separately)	F88DAB When connecting via the following cables: CD-IH202 (sold separately) CD-IU52 (sold separately) Lightning Digital AV Adapter (sold separately)	F80DAB/F980DAB/F980BT/F9880DAB/F9880BT When connecting via the following cables: CD-IV202AV (sold separately) CD-IU52 (sold separately) Lightning to VGA Adapter (sold separately)
Smartphone Setup	Device	iPhone/iPod	iPhone/iPod	iPhone/iPod	iPhone/iPod
	Connection	Bluetooth	USB1	Digital AV adapter	VGA adapter
	Apple CarPlay	—	On (*2)/Off	—	—
Bluetooth connection		Bluetooth connection is required.	—	Bluetooth connection is required.	Bluetooth connection is required.
Connection requirement		—	Connect to USB port 1 for using Apple CarPlay or AVICSYNC App .	—	—
Available sources	iPod (audio)	—	✓	— (*1)	— (*1)
	iPod (video)	—	—	— (*1)	— (*1)
	AppRadio Mode	—	—	✓	✓
	Apple CarPlay	—	✓ (*3)	—	—
	AVICSYNC App	✓	✓	✓	✓

(*1) Use AppRadio Mode to play music or videos on an iPod / iPhone. For using **AppRadio Mode**, install the **CarMediaPlayer** app on your iPod / iPhone.

➡ For details about the **CarMediaPlayer**, refer to the information on our website.

➡ Refer to the **CarMediaPlayer** manual for more information.

(*2) Select "On" for "Apple CarPlay" for using Apple CarPlay.

(*3) Available only when an **Apple CarPlay**-compatible device is connected.

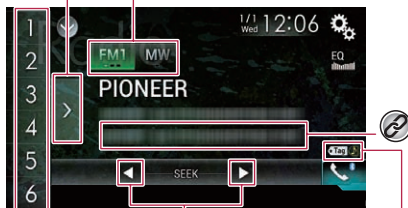
Setup for iPod / iPhone or smartphone

Android device				
Device connection method		When connecting via Bluetooth	F88DAB/F80DAB When connecting via CD-MU200 (sold separately)	F88DAB When connecting via CD-AH200 (sold separately)
Smartphone Setup	Device	Others	Others	Others
	Connection	Bluetooth / — (*5)	USB2	HDMI
	Android Auto	—	On (*1)/Off	—
Bluetooth connection		Bluetooth connection is required.	Bluetooth connection is required for using Android Auto .	Bluetooth connection is required.
Connection requirement		—	Connect to USB port 2 for using Android Auto or AVICSYNC App .	—
Available sources	AppRadio Mode	—	—	✓
	Android Auto	—	✓ (*2)(*3)	—
	AVICSYNC App	✓ (*4)	✓ (*4)	✓ (*4)
(*1) Select "On" for "Android Auto" for using Android Auto. (*2) Available only when an Android Auto -compatible device is connected. (*3) The AVICSYNC App function automatically turns off when an Android Auto -compatible device is connected with this product for the first time. From the next time a compatible device is connected, Android Auto cannot be used while the AVICSYNC App function is on. (*4) Turn on the AVICSYNC App function for using AVICSYNC App . (*5) F980DAB/F980BT/F9880DAB/F9880BT				

Radio

 **Displays the preset channel list.**
Select an item on the list ("1" to "6") to switch to the preset channel.

 **Selects the FM1, FM2, FM3, MW or LW band.**



 **Performs manual tuning.**

 **Performs seek tuning or non stop seek tuning.**
Releasing the key in a few seconds, skips to the nearest station from the current frequency.
Keeping holding the key for a long seconds, performs non stop seek tuning.

 **Recalls the preset channel stored to a key from memory.**

 **Stores the current broadcast frequency to a key.**

iTunes® tagging indicator and
iTunes® tagging song status indicator

 Stores song information to an iPod.
➔ Refer to *Storing song information to an iPod (iTunes® Tagging)* on page 70

- ☐ By pressing the ◀◀ or ▶▶ button, you can also switch the preset channels.
- ☐ By pressing and holding the ◀◀ or ▶▶ button and release, you can also perform seek tuning.

Starting procedure

1 Display the AV source selection screen.



2 Touch [Radio].

Storing the strongest broadcast frequencies

The BSM (best stations memory) function automatically stores the six strongest broadcast frequencies under the preset tuning keys "1" to "6".

- ☐ Storing broadcast frequencies with BSM may replace those you have already saved.
- ☐ Previously stored broadcast frequencies may remain stored if the number of frequencies stored has not reached the limit.

1 Touch the preset channel list display key.

2 Touch  to begin a search.

The six strongest broadcast frequencies will be stored under the preset tuning keys in the order of their signal strength.

- Touch [Cancel] to cancel the storage process.

Displaying the "Radio settings" screen

1 Display the "System" setting screen.



2 Touch [AV Source Settings].

3 Touch [Radio Settings].

Tuning into strong frequencies

Local seek tuning allows you to only tune into those radio stations with sufficiently strong signals.
The default setting is "Off".

- ☐ This setting is available only when "Radio" is selected as the source.

1 Display the "Radio Settings" screen.

➔ Refer to *Displaying the "Radio settings" screen* on page 37

2 Touch [Local].

3 Touch the item.

● **Off:**
Turns the seek tuning setting off.

● **Level1 to Level4:**
Sets the level of sensitivity for FM to **Level1** to **Level4** (for MW and LW to **Level1** or **Level2**).

- ☐ The FM "Level4" (MW and LW "Level2") setting allows you to receive the only stations with the strongest signals.

Setting the FM tuning step

You can switch the seek tuning step for the FM band.

The default setting is "100kHz".

- ☐ This setting is available when the source is turned off.
- ☐ The tuning step remains at "50kHz" during manual tuning.

1 Display the "Radio Settings" screen.

➔ Refer to *Displaying the "Radio settings" screen* on page 37

2 Touch [FM Step] to switch the step to "50kHz" or "100kHz".

Radio

Switching the sound quality of the FM tuner

The default setting is "Standard".

☐ This function is available only when you receive the FM band.

1 Display the "Radio Settings" screen.

➔ Refer to *Displaying the "Radio settings" screen* on page 37

2 Touch [Tuner Sound].

3 Touch the item.

- **Music:**
Gives priority to the sound quality.
- **Talk:**
Gives priority to noise prevention.
- **Standard:**
Gives no effect.

Setting the alternative frequency search

When the tuner cannot get a good reception, tunes to another broadcast station that supports the same programme in the current network.

The default setting is "On".

☐ This function is available only when you receive the FM band.

1 Display the "Radio Settings" screen.

➔ Refer to *Displaying the "Radio settings" screen* on page 37

2 Touch [Alternative FREQ] to switch "On" or "Off".

Setting the Auto PI search

When you switch to the broadcast station containing RDS data, searches for the same PI (Program Identification) code broadcast station from all frequency band automatically.

The default setting is "Off".

☐ This setting is available when the source is turned off.

1 Display the "Radio Settings" screen.

➔ Refer to *Displaying the "Radio settings" screen* on page 37

2 Touch [Auto PI] to switch "On" or "Off".

Limiting stations to regional programming

You can switch whether the area code is checked during the Auto PI search.

The default setting is "On".

☐ This function is available only when you receive the FM band.

1 Display the "Radio Settings" screen.

➔ Refer to *Displaying the "Radio settings" screen* on page 37

2 Touch [Regional] to switch "On" or "Off".

Receiving traffic announcements (TA)

The traffic announcement can be received from the last selected frequency, interrupting the other sources.

☐ This function is available only when you receive the FM band.

1 Display the "Radio Settings" screen.

➔ Refer to *Displaying the "Radio settings" screen* on page 37

2 Touch [TA Interrupt] repeatedly until the desired setting appears.

F88DAB F80DAB F980DAB F9880DAB

- **TA OFF** (default)
- **DAB+RDS TA**
- **RDS TA ONLY**

☐ The selected setting also applies to "TA Interrupt" under "DAB Settings".

F980BT F9880BT

- **Off** (default)
- **On**

Receiving news announcements

The news can be received from the last selected frequency, interrupting the other sources.

The default setting is "Off".

☐ This function is available only when you receive the FM band.

1 Display the "Radio Settings" screen.

➔ Refer to *Displaying the "Radio settings" screen* on page 37

2 Touch [News Interrupt] to switch "On" or "Off".

Digital Radio

F88DAB F80DAB F980DAB F9880DAB

 **Displays the preset channel list.**

Select an item on the list to switch to the preset service.

 **Selects the DAB1, DAB2, or DAB3 band.**



 **Performs manual tuning.**
When there are multiple services in the same frequency, switches the services one by one.

 **Performs seek tuning.**
Skips to the nearest ensemble.

 **Recalls the preset service component stored to a key from memory.**

 **Stores the current service component to a key.**

Digital Radio

- *1 Displays the service list screen.
 - Refer to *Selecting a service component* on page 39
- *2 Switches to time shift mode.
 - Refer to *Listening to a recent broadcast (time shift mode)* on page 39

- By pressing the **◀◀** or **▶▶** button, you can also switch the preset service components.
- By pressing and holding the **◀◀** or **▶▶** button and release, you can also perform seek tuning.

Digital Radio tuner operations

For improved Digital Radio reception, make sure a Digital Radio aerial with phantom power input (active type) is used. Pioneer recommends using AN-DAB1 (sold separately) or CA-AN-DAB.001 (sold separately).

Current consumption of Digital Radio aerial should be 100 mA or less.

➤ For details on how to connect a Digital Radio aerial, refer to the installation manual.

Digital Radio (DAB) features the following:

- High sound quality (nearly as high as for CDs, although it may be reduced in some cases in order to allow more services to be broadcast)
- Interference-free reception

MFN support

When some ensembles support the same service component, switches to another ensemble that has better reception automatically.

Starting procedure

- 1 Display the AV source selection screen.



- 2 Touch [Digital Radio].

Listening to a recent broadcast (time shift mode)

This product stores recent broadcasts to memory automatically. You can pause or listen to the stored broadcasts again by using this function (time shift mode).

- 1 Touch

- Touch to resume the live broadcast.
- Stored broadcast is overwritten by the latest broadcast.
- If the duration that a selection is paused exceeds the length of the memory capacity, playback will resume from the beginning of the selection in memory.

Selecting a service component

You can select a service component.

- When you start to use this source, service list information is automatically updated.
- When there is any change in the current ensemble, service list information is automatically updated.

- 1 Touch

- 2 Touch the category.

- **Service:**
Displays all service components.
- **Program Type:**
Searches from programme type information.
- **Ensemble:**
Displays the ensemble list.

- 3 Touch the item.

- If you touch [Update Stations], you can update the channel list.

Displaying the "DAB settings" screen

- 1 Display the "System" setting screen.



- 2 Touch [AV Source Settings].
- 3 Touch [DAB Settings].

Setting the Digital Radio aerial power supply

This function allows you to select whether to output power to a connected Digital Radio aerial.

The default setting is "On".

- This setting is available when the source is turned off.

- 1 Display the "DAB Settings" screen.

➤ Refer to *Displaying the "DAB settings" screen* on page 39

- 2 Touch [Antenna Power] to switch "On" or "Off".

Setting the service follow

The default setting is "On".

- This setting is available only when "Digital Radio" is selected as the source.
- Depending on the model used, this menu may not be displayed.

HARD LINK

When the tuner cannot get good reception, tunes to another ensemble that supports the same service component.

If no alternative service component can be found or reception remains poor, this function will automatically switch to an identical FM broadcast.

SOFT LINK

When HARD LINK is unsuccessful, tunes to another ensemble that supports the similar service component.

If no alternative service component can be found or reception remains poor, this function will automatically switch to a similar FM broadcast.

- SOFT LINK function is available when "Soft Link" is "On".
- Refer to *Setting the Soft link* on page 40
- Only available in areas where SOFT LINK function is supported.
- The broadcast content of the switched channel may differ from the content of the original channel.

- 1 Display the "DAB Settings" screen.

➤ Refer to *Displaying the "DAB settings" screen* on page 39

- 2 Touch [Service Follow] to switch "On" or "Off".

Digital Radio

Setting the Soft link

The default setting is "Off".

- ☐ This setting is available only when "Service Follow" is set to "On".
- ☐ Refer to *Setting the service follow* on page 39
- ☐ Depending on the model used, this menu may not be displayed.

1 Display the "DAB Settings" screen.

➡ Refer to *Displaying the "DAB settings" screen* on page 39

2 Touch [Soft Link] to switch "On" or "Off".

Receiving traffic announcements (TA)

The traffic announcement can be received from the last selected frequency, interrupting the other sources.

The default setting is "TA OFF".

- ☐ This setting is available only when "Digital Radio" is selected as the source.
- ☐ Depending on the model used, this menu may not be displayed.

1 Display the "DAB Settings" screen.

➡ Refer to *Displaying the "DAB settings" screen* on page 39

2 Touch [TA Interrupt].

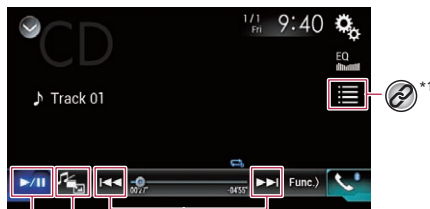
3 Touch the item.

- TA OFF
- DAB+RDS TA
- RDS TA ONLY

- ☐ The selected setting also applies to "TA Interrupt" under "Radio Settings".

Disc

Audio source screen 1



 Skips files forward or backward.

 Switches between playback and pause.

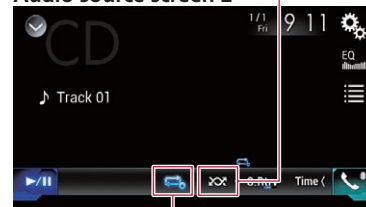
 Plays tracks in random order.

This function is available for music CD.

 : Does not play tracks in random order.

 : Plays all tracks in random order.

Audio source screen 2



 Sets a repeat play range.

 : Repeats the current disc.

 : Repeats the current track.

 **Hides the touch panel keys.**
To display again the keys, touch anywhere on the screen.

 **Performs frame-by-frame playback.**

 **Performs slow-motion playback.**

Each time you touch  it changes the speed in four steps in the following order:
1/16 → 1/8 → 1/4 → 1/2

Video source screen 1



 **Performs fast reverse or fast forward.**

Touch again to change play back the speed.

 **Stops playback.**

*3
*4
*5

Video source screen 2



 **Sets a repeat play range.**

 : Repeats all files.

 : Repeats the current chapter.

 : Repeats the current title.

 **Changes the viewing angle (Multi-angle).**

This function is available for DVDs featuring multi-angle recordings.

 **Selects the audio output from [L+R], [Left], [Right], [Mix].**

This function is available for Video-CDs and DVDs recorded with LPCM audio.

Video source screen 2



 **Resumes playback (Bookmark).**

This function is available for DVD-Video. You can memorise one point as a Bookmark for a disc (up to five discs). To clear the bookmark on the disc, touch and hold this key.

 **Returns and begins playback from the specified point.**

This function is available for DVD-Video and Video-CDs featuring PBC (playback control).

- *1 Selects a track from the list.
➔ Refer to *Selecting files from the track name list* on page 42
- *2 Switches the media file type.
➔ Refer to *Switching the media file type* on page 42
- *3 Searches for the part you want to play.
➔ Refer to *Searching for the part you want to play* on page 42
- *4 Displays the DVD menu.
➔ Refer to *Operating the DVD menu* on page 42

- ⑤ Switches the subtitle/audio language.
 - Refer to *Switching the subtitle/audio language* on page 42
- ⑥ Displays the DVD menu keypad.
 - Refer to *Operating the DVD menu using touch panel keys* on page 42

- ☐ By pressing the **◀◀** or **▶▶** button, you can also skip files/chapters forwards or backwards.
- ☐ By pressing and holding the **◀◀** or **▶▶** button, you can also perform fast reverse or fast forwards.
- ☐ If a Video-CD with PBC On is being played, **[PBCOn]** appears.
- ☐ You can set the screen size for the video image.
 - Refer to *Changing the wide screen mode* on page 69

⚠CAUTION

For safety reasons, video images cannot be viewed while your vehicle is in motion. To view video images, stop in a safe place and apply the handbrake.

Starting procedure

You can play a normal music CD, Video-CD or DVD-Video using the built-in drive of this product.

- 1 **Insert the disc.**
 - Refer to *Inserting and ejecting a disc* on page 6
- The source changes and then playback will start.
- ☐ If the disc is already set, select **[Disc]** as the playing source.

Selecting files from the track name list

- 1 **Touch .**
- 2 **Touch a track on the list to play back.**

Switching the media file type

When playing a digital media containing a mixture of various media file types you can switch between media file types to play.

- 1 **Touch .**
- 2 **Touch the item.**
 - **Music:** Switches the media file type to music (compressed audio).
 - **Video:** Switches the media file type to video.
 - **CD-DA:** Switches the media file type to CD (audio data (CD-DA)).

Searching for the part you want to play

- ☐ For DVD-Videos, you can select **[Title]**, **[Chapter]** or **[10Key]**.
- ☐ For Video-CDs, you can select **[Track]** or **[10Key]** (PBC only).

- 1 **Touch .**
- 2 **Touch **[Title]**, **[Chapter]**, **[10Key]**, or **[Track]**.**
- 3 **Touch **[0]** to **[9]** to input the desired number.**
- 4 **Touch  to start playback from the number you registered.**

Operating the DVD menu

You can operate the DVD menu by touching the menu item on the screen directly.

- ☐ This function may not work properly with some DVD disc content. In that case, use touch panel keys to operate the DVD menu.

- 1 **Touch  or **[MENU]**.**
- 2 **Touch the menu item.**

Switching the subtitle/audio language

- 1 **Touch  or .**
 -  Changes the subtitle language.
 -  Changes the audio language.
- ☐ You can specify the desired language as the default subtitle/audio languages.
- Refer to *Setting the top-priority languages* on page 67

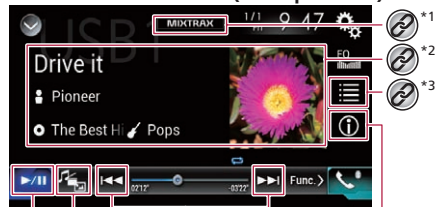
Operating the DVD menu using touch panel keys

If items on the DVD menu appear, the touch panel keys may overlay them. If so, select an item using those touch panel keys.

- 1 **Touch .**
- 2 **Touch , ,  or  to select the menu item.**
- 3 **Touch .**
 - ☐ The way to display the menu differs depending on the disc.
 - If you touch , the touch panel keys disappear and the  icon is displayed.

Compressed files

Audio source screen 1 (Example: USB)



*4 Skips files forward or backward.

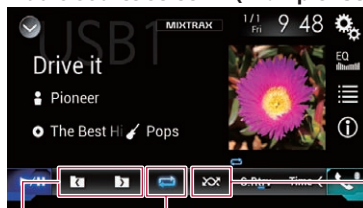
Switches between playback and pause.

Switches the current music information display.

Plays files in random order.

: Does not play files in random order.
 : Plays all files within the repeat range in random order.

Audio source screen 2 (Example: USB)



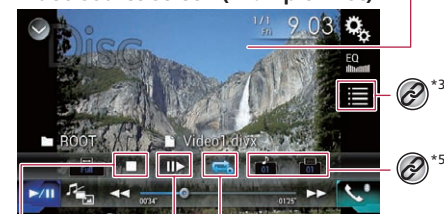
Sets a repeat play range.

or : Repeats all files.
 : Repeats the current folder.
 or : Repeats the current file.

Selects the previous folder or the next folder.

Hides the touch panel keys.
 To display again the keys, touch anywhere on the screen.

Video source screen (Example: Disc)



Sets a repeat play range.

or : Repeats all files.
 : Repeats the current folder.
 : Repeats the current file.

Performs frame-by-frame playback.
 This function is available only for compressed video files stored on a disc.

Performs slow-motion playback.

Stops playback.

Compressed files

Video source screen (Example: Disc)



***4 Performs fast reverse or fast forward.**

Touch again to change the playback speed.



Switches between playback and pause.



Hides the touch panel keys.

To display again the keys, touch anywhere on the screen.

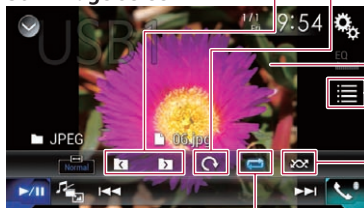


Rotates the displayed picture 90° clockwise.



Selects the previous or next folder.

Still image screen



Sets a repeat play range.



: Repeats all files.



: Repeats the current folder.



Plays files in random order.

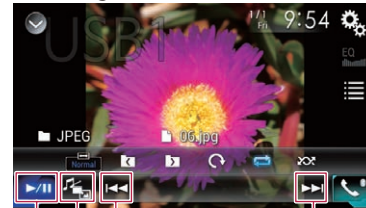


: Does not play files in random order.



: Plays all files in the current repeat play range in random order.

Still image screen



***4 Performs fast reverse or fast forward.**

Touch again to change the playback speed.



Switches between playback and pause.



***1 Displays the MIXTRAX screen.**

Refer to *MIXTRAX* on page 56



***2 Displays the link search screen.**

This function is available for the external storage device (USB, SD) only.

Refer to *Selecting a song from the list related to the song currently playing (link search)* on page 45



***3 Selects a file from the list.**

Refer to *Selecting files from the file name list* on page 45

When you play compressed audio files stored in an external storage device (USB, SD), you can search for a file using Music Browse.

Refer to *Selecting a file by Music Browse* on page 45

Compressed files

- *4 Switches the media file type.
 - Refer to *Switching the media file type* on page 45
- *5 Switches the subtitle/audio language.
 - ❑ This function is available only for compressed video files stored on a disc.
 - Refer to *Switching the subtitle/audio language* on page 45

You can play compressed audio, compressed video or still image files stored in a disc or an external storage device (USB, SD) using the built-in drive of this product.

- Refer to *Media compatibility chart* on page 80
- ❑ Depending on the model used, the SD source is not available.
 - Refer to *Supported AV source* on page 9
- ❑ By pressing the or , you can also skip files forwards or backwards.
- ❑ By pressing and holding the or button on the audio or video file, you can perform fast reverse or fast forwards.
- ❑ By pressing and holding the or button on the still image file, you can search through 10 JPEG files at a time. If the file currently being played is the first or last file in the folder, the search is not performed.
- ❑ JPEG images are not displayed in the rear display.
- ❑ You can set the screen size for the video and JPEG images.
- Refer to *Changing the wide screen mode* on page 69

⚠CAUTION

For safety reasons, video images cannot be viewed while your vehicle is in motion. To view video images, stop in a safe place and apply the handbrake.

Starting procedure (for Disc)

- 1 **Insert the disc.**
 - Refer to *Inserting and ejecting a disc* on page 6
 - ❑ If the disc is already set, select **[Disc]** as the playing source.

Starting procedure (for USB/SD)

- 1 **Insert the SD memory card into the SD card slot or plug the USB storage device into the USB connector.**
 - Refer to *Inserting and ejecting an SD memory card* on page 6

- Refer to *Plugging and unplugging a USB storage device* on page 6

2 Display the AV source selection screen.



- 3 **Touch [USB] or [SD].**
 - ❑ Play back is performed in order of folder numbers. Folders are skipped if they contain no playable files.

Operations common to all file types

Selecting files from the file name list

You can find files or folders to play back using the file name or folder name list.

- 1 **Touch** .
- 2 **Touch a file on the list to play back.**
 - ❑ Touching a folder on the list shows its contents. You can play a file on the list by touching it.

Switching the media file type

When playing a digital media containing a mixture of various media file types you can switch between media file types to play.

- 1 **Touch** .
- 2 **Touch the item.**
 - **Music:**
Switches the media file type to music (compressed audio).
 - **Video:**
Switches the media file type to video.
 - **CD-DA:**
Switches the media file type to CD (audio data (CD-DA)).
 - **Photo:**
Switches the media file type to still image (JPEG data).

Audio file operations

Selecting a file by Music Browse

You can select files to play back using the category list if the files contain tag information.

- ❑ This function is available for the external storage device (USB, SD) only.

- 1 **Touch .**
- 2 **Touch the "Tag" tab.**
- 3 **Touch the desired category to display the file list.**
- 4 **Touch the item.**
Refine the item until the desired song title or file name is displayed on the list.
- 5 **Touch the desired song title or file name to play back.**

Selecting a song from the list related to the song currently playing (link search)

- ❑ This function is available for the external storage device (USB, SD) only.
- ❑ If you touch the artwork, the list of songs in the album is displayed.

- 1 **Touch song information to open the list of songs.**
- 2 **Touch the song to play back.**

Video file operations

Switching the subtitle/audio language

- 1 **Touch or .**
 - : Changes the subtitle language.
 - : Changes the audio language.
 - ❑ You can specify the desired language as the default subtitle/audio languages.
 - Refer to *Setting the top-priority languages* on page 67

Compressed files

Still image file operations

Setting the slideshow interval

JPEG files can be viewed as a slideshow on this product. In this setting, the interval between each image can be set.

The default setting is "10sec".

□ This setting is available during playback of the JPEG files.

1 Display the "Video Setup" screen.



2 Touch [Time Per Photo Slide].

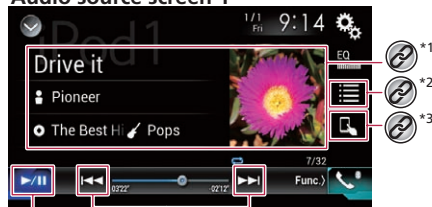
3 Touch the item.

The following items are available:

5sec, 10sec, 15sec, Manual.

iPod

Audio source screen 1



Skips files forward or backward.

Switches between playback and pause.

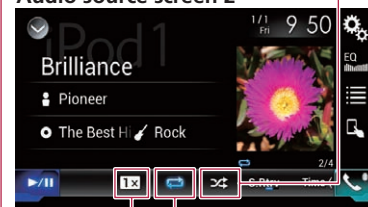
Changes the audiobook speed.

- : Normal playback
- : Fast playback
- : Slow-motion playback

Sets the shuffle play.

- : Plays randomly songs or videos within the selected list.
- : Plays album randomly.

Audio source screen 2



Sets a repeat play range.

- : Repeats all in the selected list.
- : Repeats the current song or video.

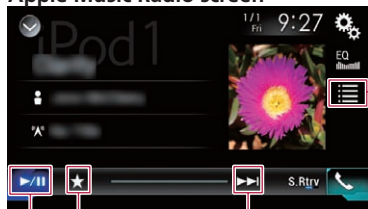
 **Hides the touch panel keys.**
To display again the keys, touch anywhere on the screen.

Video source screen



 **Performs fast reverse or fast forward.**

Apple Music Radio screen



 **Skips tracks forward.**

 **Displays the pop-up menu for Apple Music Radio.**

 **Switches between playback and pause.**

-  *1 Displays the link search screen.
➔ Refer to *Selecting a song from the list related to the song currently playing (link search)* on page 45
-  *2 Selects a song or video from the list.
➔ Refer to *Selecting song or video sources from the playlist screen* on page 47
-  *3 Switches the control mode to "App Mode".
➔ Refer to *Using this product's iPod function from your iPod* on page 47

- ☐ By pressing the  or  button, you can also skip files/chapters forwards or backwards.
— Skipping backwards is not available while playing **Apple Music Radio**.
- ☐ By pressing and holding the  or  button, you can also perform fast reverse or fast forwards.
— This function is not available while playing **Apple Music Radio**.
- ☐ You can set the screen size for the video image.
➔ Refer to *Changing the wide screen mode* on page 69
- ☐ The audiobook speed icon does not change when using this function with an iPhone 6 Plus, iPhone 6, iPhone 5s, iPhone 5c, iPhone 5, or iPod touch (5th generation).
The setting changes as follows when the icon is touched, even though the icon does not change.
Faster—Slower—Normal—Faster...

CAUTION

For safety reasons, video images cannot be viewed while your vehicle is in motion. To view video images, stop in a safe place and apply the handbrake.

Connecting your iPod

When connecting an iPod to this product, select the method for connecting your device. Settings are required according to the connected device.

- ➔ Refer to *Setup for iPod / iPhone or smartphone* on page 34
- ☐ The available sources vary depending on the selected method for connecting your device.
➔ Refer to *Information on the connections and functions for each device* on page 35
- ☐ Depending on the generation or version of the iPod, some functions may not be available.
- ☐ The video image of the iPod may have noise if the rear display outputs the video image. When noise is produced in the video image of the iPod, turn off the output setting of the rear display.

- ➔ Refer to *Selecting the video for the rear display* on page 70

Starting procedure

- ☐ When connecting an iPhone or iPod touch, quit all applications before connecting the device.

- 1 **Connect your iPod.**
➔ Refer to *Connecting your iPod* on page 47
- 2 **Display the AV source selection screen.**



3 Touch [iPod].

Selecting song or video sources from the playlist screen

You can search for the song, video, or radio stations you want to play from the playlist screen.

- 1 **Touch .**
- 2 **Touch  or  to switch the music or video category list.**
 - ☐ The video category list icon is not available when using iPod function with an iPhone 6 Plus, iPhone 6, iPhone 5s, iPhone 5c, iPhone 5, or iPod touch (5th generation).
- 3 **Touch the category.**
 - ☐ If you use English as the system language, the alphabet search function is available. Touch the initial search bar to use this function.
- 4 **Touch the title of the list.**
- 5 **Start playback of the selected list.**
 - ☐ You can play playlists created with the **MusicSphere** application. The application is available on our website.

Using this product's iPod function from your iPod

You can control this product's iPod function from the iPod on "App Mode". The application screen of the iPod can be displayed on this product, and the music files and video files are played back with this product.

iPod

- ❑ This function is not available when using iPod function with an iPhone 6 Plus, iPhone 6, iPhone 5s, iPhone 5c, iPhone 5, or iPod touch (5th generation).
- ❑ While this function is in use, the iPod will not turn off even if the ignition key is turned off. Operate the iPod to turn off the power.

1 Touch [🔍].

2 Operate the connected iPod to select a video or song and play.

- ❑ Some functions are still accessible from this product even if the control mode is set to "App Mode". However, the operation will depend on your applications.
- Touch [🔍] to switch the control mode.

Selecting a song from the list related to the song currently playing (link search)

- ❑ If you touch the artwork, the list of songs in the album is displayed.
- ❑ This function is not available while playing Apple Music Radio.

1 Touch song information to open the list of songs.

2 Touch the song to play back.

Using Apple Music Radio

❗ Important

Apple Music Radio may not be available in your country or region.

For details about Apple Music, visit the following site:

<http://www.apple.com/music/>

- ❑ This function is only available when using iPod function with an iPhone 6 Plus, iPhone 6, iPhone 5s, iPhone 5c, iPhone 5, or iPod touch (5th generation).

1 Touch [📁].

2 Touch [📶].

3 Touch [Radio].

Playing back songs similar to the current song

You can listen to songs similar to the song currently being played.

1 Touch [★].

2 Touch [Play More Like This].

- ❑ When the menu item is not active, the function is not available for the current song.
- ❑ If you touch [Play More Like This] when the menu item is highlighted, the function will turn off.

Setting the current song not to be played back again

You can set the current song not to be played back again.

1 Touch [★].

2 Touch [Never Play This Song].

- ❑ When the menu item is not active, the function is not available for the current song.
- ❑ If you touch [Never Play This Song] when the menu item is highlighted, the function will turn off.

Adding the current song to the wish list

You can add the current song to the wish list for easy access to the song later.

1 Touch [★].

2 Touch [Add to iTunes Wish List].

- ❑ If the song is already in the wish list, [Remove from iTunes Wish List] is displayed. If you touch this key, the song will be removed from the wish list.

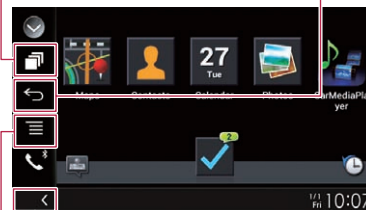
AppRadio Mode



Displays the launcher application screen.



Displays the previous screen.



Displays the current source.



Displays the menu screen.

- ❑ Press the [⌘] button twice to hide the App control side bar. Press the [⌘] button twice again to display it again.
- ❑ [📶] and [📁] are not available depending on the type of device.

⚠ WARNING

Certain uses of an iPhone or a smartphone may not be legal while driving in your jurisdiction, so you must be aware of and obey any such restrictions.

If in doubt as to a particular function, only perform it while the car is parked.

No feature should be used unless it is safe to do so under the driving conditions you are experiencing.

AppRadio Mode Compatibility

- ❑ F80DAB/F980DAB/F980BT/F9880DAB/F9880BT AppRadio Mode is only available on an iPhone.

iPhone models

- iPhone 4, 4s, 5, 5c, 5s, 6, 6 Plus
- iPod touch (4th, 5th generation)

AppRadio Mode

Smartphone (Android) models

- For details about Android device compatibility with this product, refer to the information on our website.

Using AppRadio Mode

You can control applications for an iPhone or a smartphone directly from the screen (**AppRadio Mode**).
In **AppRadio Mode**, you can operate applications with finger gestures such as tapping, dragging, scrolling or flicking on the screen of this product.

Important

- To use **AppRadio Mode**, install the AppRadio app on the iPhone or smartphone in advance. For details about the AppRadio app, visit the following site:
<http://www.pioneer.eu/AppRadioMode>
- Be sure to read Using app-based connected content before you perform this operation.
- Refer to *Using app-based connected content* on page 83

- Content and functionality of compatible applications are the responsibility of the App providers.
- In **AppRadio Mode**, usage is limited while driving, with availability of functions and content determined by the App providers.
- **AppRadio Mode** allows access to applications other than those listed, subject to limitations while driving.
- PIONEER IS NOT RESPONSIBLE AND DISCLAIMS LIABILITY FOR THIRD PARTY (NON-PIONEER) APPS AND CONTENT, INCLUDING WITHOUT LIMITATION ANY INACCURACIES OR INCOMPLETE INFORMATION.

- In this chapter, iPhone and iPod touch will be referred to as "iPhone".
- The compatible finger gestures vary depending on the application for an iPhone or a smartphone.
- Even though an application is not compatible with **AppRadio Mode**, depending on the application an image may be displayed. But you can not operate the application.

Starting procedure

When connecting an iPhone or smartphone to this product, select the method for connecting your device. Settings are required according to the connected device.

- Refer to *Setup for iPod / iPhone or smartphone* on page 34
- Touch the desired application icon after the AppRadio app is launched.

After the desired application is launched, the application operation screen appears.

- If you connect your device while an **AppRadio Mode**-compatible application is already running, the application operation screen will appear on this product.
- Press the **⏮** button to go back to the top menu screen.

For iPhone users

- When you use an iPhone with a Lightning connector, connect the iPhone to this product via Bluetooth wireless technology and unlock the iPhone in advance.
 - Refer to *Registering your Bluetooth devices* on page 30
- 1 **Connect your iPhone.**
 - Refer to the Installation Manual.
- 2 **Press the **⏮** button.**
- 3 **Touch [APPS].**
 - When you use an iPhone with a 30-pin connector, messages appear on the screen of this product and your iPhone. Proceed to the next step.
 - When you use an iPhone with a Lightning connector, the **AppRadio app** is launched, and the **AppRadio Mode** screen (Application menu screen) appears after this step. In such a case, the following steps are not required.
- 4 **Use your iPhone to launch the application.**
The **AppRadio app** is launched.
- 5 **Touch [OK] on the screen of this product.**
The **AppRadio Mode** screen (Application menu screen) appears.

For smartphone (Android) users

- F88DAB**
- 1 **Register your smartphone and connect it to this product via Bluetooth wireless technology.**
 - Refer to *Registering your Bluetooth devices* on page 30
- 2 **Unlock your smartphone and connect it to this product.**
 - Refer to the Installation Manual.
- 3 **Press the **⏮** button.**
- 4 **Touch [APPS].**
The **AppRadio app** is launched, and the **AppRadio Mode** screen (Application menu screen) appears.

Using the keyboard (for iPhone users)

When you tap the text input area of an application for iPhone, a keyboard will be displayed on the screen. You can input the desired text directly from this product.

- This function may not be available depending on your iPhone.
- This function is only available in **AppRadio Mode** on the iPhone.

CAUTION

For your safety, the keyboard functionality is only available when the vehicle is stopped and the handbrake is engaged.

- 1 **Set the keyboard language.**
 - Refer to *Setting the keyboard language with the application for iPhone* on page 60
- 2 **Start up AppRadio Mode.**
 - Refer to *Starting procedure* on page 49
- 3 **Touch the text input area on the application operation screen.**
A keyboard for entering text appears.

AppRadio Mode

Adjusting the image size (for smartphone (Android) users)

F88DAB

Black dots may appear on the screen when using **AppRadio Mode** with an Android device connected to this product.

- This setting is available only when you stop your vehicle in a safe place and apply the handbrake.
- This function can be set when your Android device is able to enter **AppRadio Mode**.
- The setting screen automatically appears in the following cases:
 - When entering **AppRadio Mode** after a Bluetooth connection using SPP (Serial Port Profile) has been established.
 - When a Bluetooth connection using SPP (Serial Port Profile) has been established in **AppRadio Mode**.

1 Display the “System” setting screen.



2 Touch [Input/Output Settings].

3 Touch [AppRadio Video Adjustment].

4 Touch [OK].

5 Touch [◀], [▶], [▲] or [▼] to adjust the line to fit smartphone image size.

6 Touch [Preview].

7 Touch [OK].

- If you want to adjust the setting again from the beginning, touch **[RESET]**.

Using the audio mix function

You can output audio mixing AV source and an application for iPhone or smartphone when **AppRadio Mode** is used.

- Depending on the application or the AV source, this function may not be available.
- When the audio mix function is set to on, the voice guidance of the navigation system is not output. To output the voice guidance of the navigation system, set the audio mix function to off.

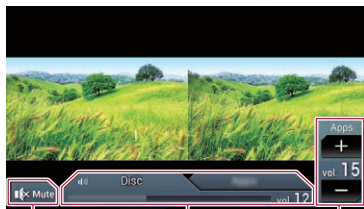
1 Start up AppRadio Mode.

- ➡ Refer to *Starting procedure* on page 49

2 Press the VOL (+/-) button.

The audio mix menu will be displayed on the screen.

- The audio mix menu is displayed for four seconds. If the screen disappears, press the **VOL (+/-)** button again. The screen reappears.
- The AV operation screen and the Application screen can be switched by pressing the **MODE** button.



- ① Touch to mute. Touch again to unmute.
- ② Sets whether to switch the sound mix function on or off.
 - Left tab:
 - The audio mix function is enabled (mix on) and the App volume is displayed.
 - Right tab:
 - The audio mix function is disabled (mix off).
- The right tab is not displayed on the AV operation screen.
- ③ Adjusts the application audio volume.
 - The App volume is not displayed when the right tab is selected.
 - You cannot adjust the volume of the main sound on the screen. Press the **VOL (+/-)** button to adjust the volume of the main sound.

Apple CarPlay

You can control applications for an iPhone directly from the screen (**Apple CarPlay**).

In **Apple CarPlay**, you can operate applications with finger gestures such as tapping, dragging, scrolling or flicking on the screen of this product.

- This function is only available when using iPod function with an iPhone 6 Plus, iPhone 6, iPhone 5s, iPhone 5c, or iPhone 5.

⚠WARNING

Certain uses of an iPhone may not be legal while driving in your jurisdiction, so you must be aware of and obey any such restrictions.

If in doubt as to a particular function, only perform it while the car is parked.

No feature should be used unless it is safe to do so under the driving conditions you are experiencing.

Using Apple CarPlay

❗Important

Apple CarPlay may not be available in your country or region. For details about **Apple CarPlay**, visit the following site:

<http://www.apple.com/ios/carplay>

- Content and functionality of compatible applications are the responsibility of the App providers.
- In **Apple CarPlay**, usage is limited while driving, with availability of functions and content determined by the App providers.
- **Apple CarPlay** allows access to applications other than those listed, subject to limitations while driving.
- **PIONEER IS NOT RESPONSIBLE AND DISCLAIMS LIABILITY FOR THIRD PARTY (NON-PIONEER) APPS AND CONTENT, INCLUDING WITHOUT LIMITATION ANY INACCURACIES OR INCOMPLETE INFORMATION.**

- The compatible finger gestures vary depending on the application for an iPhone.

Starting procedure

When connecting an **Apple CarPlay**-compatible device to this product, select the method for connecting your device. Settings are required according to the connected device.

- ➡ Refer to *Setup for iPod / iPhone or smartphone* on page 34
- To achieve optimum usability of **Apple CarPlay**, set the driving position setting correctly according to the vehicle.
 - ➡ Refer to *Setting the driving position* on page 51

Apple CarPlay

- ❑ You can adjust the guidance volume and alert sound volume separately from the main sound volume when **Apple CarPlay** is used.

➔ Refer to *Adjusting the volume* on page 51

1 Connect an Apple CarPlay-compatible device to this product via USB.

- ➔ Refer to the Installation Manual.
- The Application menu screen appears.

- ❑ If an **Apple CarPlay**-compatible device has been connected and another screen is displayed, touch **[Apple CarPlay]** on the top menu screen to display the Application menu screen.
- ❑ The Bluetooth connection with the **Apple CarPlay**-compatible device will be terminated automatically if **Apple CarPlay** is turned on. While **Apple CarPlay** is turned on, only a Bluetooth audio connection will be possible for devices other than the device connected via **Apple CarPlay**.
- ❑ Hands-free phoning via Bluetooth wireless technology is not available while **Apple CarPlay** is on. If **Apple CarPlay** is turned on during a call on a mobile phone other than the **Apple CarPlay**-compatible device, the Bluetooth connection will be terminated after the call ends.
- ❑ The route guidance by the internal navigation system will stop automatically if the route guidance function in **Apple CarPlay** is launched.

Setting the driving position

To achieve optimum usability of **Apple CarPlay**, set the driving position setting correctly according to the vehicle. The default setting is "Left".

1 Display the "System" setting screen.



2 Touch [Driving Position].

3 Touch the item.

- **Left:**
Select for a left-hand drive vehicle.
- **Right:**
Select for a right-hand drive vehicle.

The setting will be applied the next time an **Apple CarPlay**-compatible device is connected to this product.

Adjusting the volume

You can adjust the guidance volume and alert sound volume separately from the main sound volume when **Apple CarPlay** is used.

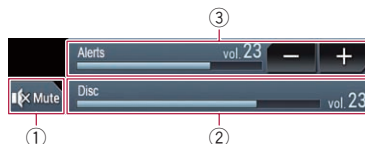
1 Start up Apple CarPlay.

- ➔ Refer to *Starting procedure* on page 50

2 Press the VOL (+/-) button.

The volume menu will be displayed on the screen.

- ❑ The volume menu is displayed for four seconds. If the menu disappears, press the **VOL (+/-)** button again. The menu reappears.



- ① Touch to mute. Touch again to unmute.
- ② Displays the main sound volume.
 - ❑ You cannot adjust the volume of the main sound on the screen. Press the **VOL (+/-)** button to adjust the volume of the main sound.
- ③ Adjusts the guidance volume and alert sound volume.
 - ❑ Each touch of **[+]** or **[-]** increases or decreases the volume level.

Android Auto™

F88DAB F80DAB

You can control applications for a smartphone directly from the screen (**Android Auto**).

In **Android Auto**, you can operate applications with finger gestures such as tapping, dragging, scrolling or flicking on the screen of this product.

- ❑ Android devices running Android 5.0 or higher are compatible with **Android Auto**.

⚠WARNING

Certain uses of a smartphone may not be legal while driving in your jurisdiction, so you must be aware of and obey any such restrictions.

If in doubt as to a particular function, only perform it while the car is parked.

No feature should be used unless it is safe to do so under the driving conditions you are experiencing.

Using Android Auto

❗Important

Android Auto may not be available in your country or region.

For details about **Android Auto**, please refer to the Google support site:

<http://support.google.com/androidauto>

- Content and functionality of compatible applications are the responsibility of the App providers.
- In **Android Auto**, usage is limited while driving, with availability of functions and content determined by the App providers.
- **Android Auto** allows access to applications other than those listed, subject to limitations while driving.
- PIONEER IS NOT RESPONSIBLE AND DISCLAIMS LIABILITY FOR THIRD PARTY (NON-PIONEER) APPS AND CONTENT, INCLUDING WITHOUT LIMITATION ANY INACCURACIES OR INCOMPLETE INFORMATION.

- ❑ The compatible finger gestures vary depending on the application for a smartphone.

Starting procedure

When connecting an **Android Auto**-compatible device to this product, select the method for connecting your device. Settings are required according to the connected device.

- ➔ Refer to *Setup for iPod / iPhone or smartphone* on page 34

- ❑ To achieve optimum usability of **Android Auto**, set the driving position setting correctly according to the vehicle.
 - ➔ Refer to *Setting the driving position* on page 52
- ❑ You can adjust the guidance volume and alert sound volume separately from the main sound volume when **Android Auto** is used.
 - ➔ Refer to *Adjusting the volume* on page 52
- ❑ If the auto-launch function is set, **Android Auto** will launch automatically as soon as a connection to an **Android Auto**-compatible device is established.
 - ➔ Refer to *Setting the auto-launch function* on page 52

1 Connect an Android Auto-compatible device to this product via USB.

- ➔ Refer to the Installation Manual.

2 Press the button.

3 Touch [Android Auto].

A Bluetooth connection with the **Android Auto**-compatible device will automatically be established and a Bluetooth connection with any other device will be terminated.

- ❑ If three devices are already paired, the message confirming whether to delete the registered device is displayed. If you want to delete the device, touch [Agree]. If you want to delete other device, touch [BT Settings] and delete the device manually.
 - ➔ Refer to *Registering your Bluetooth devices* on page 30
- ❑ If **Android Auto** is turned on during a call on a mobile phone other than the **Android Auto**-compatible device, the Bluetooth connection will switch to the **Android Auto**-compatible device after the call ends.

Setting the auto-launch function

If this function is set to on, **Android Auto** will launch automatically when an **Android Auto**-compatible device is connected to this product.

The default setting is "On".

- ❑ **Android Auto** will launch automatically only when "Smartphone Setup" is correctly set for using **Android Auto** and an **Android Auto**-compatible device is correctly connected to this product.

1 Display the "System" setting screen.



2 Touch [Android Auto Auto-launch] to switch "On" or "Off".

Setting the driving position

To achieve optimum usability of **Android Auto**, set the driving position setting correctly according to the vehicle. The default setting is "Left".

1 Display the "System" setting screen.



2 Touch [Driving Position].

3 Touch the item.

- **Left:**
Select for a left-hand drive vehicle.
- **Right:**
Select for a right-hand drive vehicle.

The setting will be applied the next time an **Android Auto**-compatible device is connected to this product.

Adjusting the volume

You can adjust the guidance volume and alert sound volume separately from the main sound volume when **Android Auto** is used.

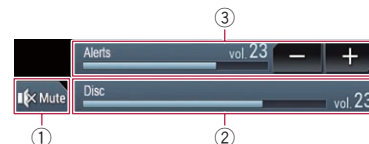
1 Start up Android Auto.

- ➔ Refer to *Starting procedure* on page 51

2 Press the VOL (+/-) button.

The volume menu will be displayed on the screen.

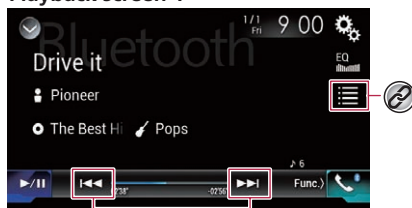
- ❑ The volume menu is displayed for four seconds. If the menu disappears, press the **VOL (+/-)** button again. The menu reappears.



- ① Touch to mute. Touch again to unmute.
- ② Displays the main sound volume.
 - ❑ You cannot adjust the volume of the main sound on the screen. Press the **VOL (+/-)** button to adjust the volume of the main sound.
- ③ Adjusts the guidance volume and alert sound volume.
 - ❑ Each touch of [+] or [-] increases or decreases the volume level.

Bluetooth audio player

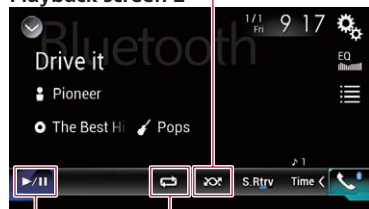
Playback screen 1



Skips files forward or backward.

Plays files in random order.

Playback screen 2



Sets a repeat play range.

Switches between playback and pause.

Selects a file from the list.
 ➔ Refer to *Selecting files from the file name list* on page 53

- ❑ Depending on the Bluetooth audio player connected to this product, the available operations with this product may be limited to the following two levels:
 - A2DP (Advanced Audio Distribution Profile): Only playing back songs on your audio player is possible.

- A2DP and AVRCP (Audio/Video Remote Control Profile):
 - Playing back, pausing, selecting songs, etc., are possible.
- ❑ Depending on the Bluetooth audio player connected to this product, some functions may not be available.
- ❑ While you are listening to songs on your Bluetooth device, please refrain from operating the phone function as much as possible. If you try operating, the signal may cause noise for song playback.
- ❑ When you are talking on the Bluetooth device connected to this product via Bluetooth, it may pause playback.
- ❑ By pressing the or button, you can also skip files forwards or backwards.
- ❑ By pressing and holding the or button, you can also perform fast reverse or fast forwards.

Starting procedure

- ❑ Before using the Bluetooth audio player, register and connect the device to this product.
 - ➔ Refer to *Registering your Bluetooth devices* on page 30

1 Pull out the connecting cable for using AppRadio Mode.

- ❑ You cannot use Bluetooth audio player when the connecting cable for using **AppRadio Mode** is connected.

2 Display the “System” setting screen.



3 Touch [AV Source Settings].

4 Confirm that “Bluetooth Audio” is turned on.

5 Display the AV source selection screen.



6 Touch [Bluetooth Audio].

Selecting files from the file name list

- ❑ This function is available only when the AVRCP version of the Bluetooth device is 1.4 or higher.

1 Touch .

2 Touch a file or a folder on the list to play back.

HDMI source

F88DAB



Hides the touch panel keys.

To display again the keys, touch anywhere on the screen.



- ❑ A High Speed HDMI® Cable (sold separately) is required for connection.
 - ➔ Refer to the Installation Manual.
- ❑ You can set the screen size for the video image.
 - ➔ Refer to *Changing the wide screen mode* on page 69

CAUTION

For safety reasons, video images cannot be viewed while your vehicle is in motion. To view video images, stop in a safe place and apply the handbrake.

Starting procedure

1 Display the AV source selection screen.



2 Touch [HDMI].

AUX source



Hides the touch panel keys.

To display again the keys, touch anywhere on the screen.



Switches between the video input and the sound input.

- ❑ A Mini-jack AV cable (CD-RM10) (sold separately) is required for connection.
 - ➔ Refer to the Installation Manual.
- ❑ You can set the screen size for the video image.
 - ➔ Refer to *Changing the wide screen mode* on page 69

CAUTION

For safety reasons, video images cannot be viewed while your vehicle is in motion. To view video images, stop in a safe place and apply the handbrake.

Starting procedure

You can display the video image output by the device connected to video input.

1 Display the "System" setting screen.



2 Touch [Input/Output Settings].

3 Confirm that "AUX Input" is turned on.

4 Display the AV source selection screen.



5 Touch [AUX].

Setting the video signal

When you connect this product to an AUX equipment, select the suitable video signal setting. The default setting is "Auto".

- ❑ You can operate this function only for the video signal input into the AUX input.

1 Display the "Video Setup" screen.



2 Touch [Video Signal Setting].

3 Touch [AUX].

4 Touch the item.

The following items are available:

Auto, PAL, NTSC, PAL-M, PAL-N, SECAM.

AV input

-  **Hides the touch panel keys.**
To display again the keys, touch anywhere on the screen.



CAUTION

For safety reasons, video images cannot be viewed while your vehicle is in motion. To view video images, stop in a safe place and apply the handbrake.

Starting procedure (for AV source)

You can display the video image output by the device connected to video input.

➡ Refer to the Installation Manual.

- 1 Display the “System” setting screen.



- 2 Touch [Input/Output Settings].

- 3 Touch [AV Input].

- 4 Touch [Source].

❑ If “Source” is selected, “2nd Camera Input” is automatically set to “Off”.

➡ Refer to *Setting the second camera activation* on page 59

- 5 Display the AV source selection screen.



- 6 Touch [AV].

Starting procedure (for camera)

You can display the image output by the camera connected to video input.

➡ Refer to the Installation Manual.

- 1 Display the “System” setting screen.



- 2 Touch [Input/Output Settings].

- 3 Touch [AV Input].

- 4 Touch [Camera].

- 5 Display the AV source selection screen.



- 6 Touch [Camera View].

❑ When the camera view of both the rear view camera and 2nd camera are available, the key to switch the display appears. Touch this key to switch the display between the rear view image and 2nd camera image.

Setting the video signal

When you connect this product to an AV equipment, select the suitable video signal setting.
The default setting is “Auto”.

❑ You can operate this function only for the video signal input into the AV input.

- 1 Display the “Video Setup” screen.



- 2 Touch [Video Signal Setting].

- 3 Touch [AV].

- 4 Touch the item.

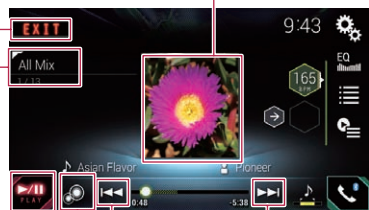
The following items are available:

Auto, PAL, NTSC, PAL-M, PAL-N, SECAM.

 Exits the MIXTRAX screen.

 Displays the LinkGate screen.

Touch the desired item. Songs related to the selected item are played.



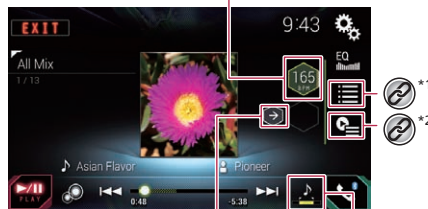
 Selects a track.

 Turns on or off the MIXTRAX original visual display.

 Switches between playback and pause.

 Displays the item selected on the LinkGate screen or item selection screen.

 Specifies the BPM.



 Sets to the original BPM (Beats Per Minute).

 Specifies the playback portion.

 : Plays back a middle portion.

 : Plays back a long portion.

 : Plays back a short portion.

 *1 Selects an item from the list.
➤ Refer to *Selecting an item from the list* on page 56

 *2 Selects songs not to be played.
➤ Refer to *Selecting songs not to be played* on page 56

Using MIXTRAX

MIXTRAX is original technology for creating non-stop mixes of selections from your audio library, complete with DJ effects that make them sound.

❑ FLAC files are skipped during MIXTRAX playback.

Starting procedure

- 1 Insert the SD memory card into the SD card slot or plug the USB storage device into the USB connector.
➤ Refer to *Inserting and ejecting an SD memory card* on page 6
➤ Refer to *Plugging and unplugging a USB storage device* on page 6
- 2 Display the AV source selection screen.



- 3 Touch [USB] or [SD].
- 4 Touch [MIXTRAX].

Selecting an item from the list

You can specify an item to play songs related to it.

1 Touch .

The following lists are available:

-  : displays the mix pattern list.
-  : displays the tag list.
-  : displays the file list.

2 Touch an item in the list.

Selecting songs not to be played

You can select items or songs not to be played.

1 Touch .

2 Touch .

3 Touch the category.

4 Touch the box on the left of the item or song that you do not want to play.

Displaying the “MIXTRAX Settings” screen

- 1 Display the “System” setting screen.



- 2 Touch [AV Source Settings].

- 3 Touch [MIXTRAX Settings].

Setting the flash pattern

The flashing colour changes with the changes in the sound and bass levels.

The default setting is “Sound1”.

- 1 Display the “MIXTRAX Settings” screen.

- Refer to *Displaying the “MIXTRAX Settings” screen* on page 57

- 2 Touch [Flash Pattern].

- 3 Touch the item.

- **Sound1 to Sound6:**

The flash pattern changes according to the sound level.

- **L-Pass1 to L-Pass6:**

The flash pattern changes according to the bass level.

- **Random1:**

The flash pattern changes randomly according to the sound level mode and low pass mode.

- **Random2:**

The flash pattern changes randomly according to the sound level mode.

- **Random3:**

The flash pattern changes randomly according to the low pass mode.

- **Off:**

The flash pattern does not flash.

F88DAB

F80DAB

F980DAB

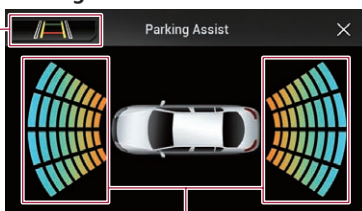
F9880DAB



Switches the display to the rear view camera image.

The display switches only when the rear view camera setting is set to “On” and the gearstick is in the REVERSE (R) position.

Parking Assist screen

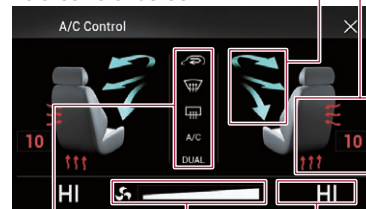


The position of detected obstacles

The heating setting for the seat

The fan direction

A/C Control screen



The fan speed

The internal temperature setting for the seat

The status of the A/C function

Using the Vehicle Bus adapter

By connecting the optional Vehicle Bus adapter, you can display the operation status of the vehicle's parking sensor function and climate control panel on the screen.

Important

- For information on installing the Vehicle Bus adapter, see the operating manual of the Vehicle Bus adapter.
- After installing the Vehicle Bus adapter, be sure to check operations.
- For details about vehicle models that are compatible with Vehicle Bus adapters, refer to the information on our website.
- Functions and displays vary depending on the vehicle model. For details of the functions available according to the model, refer to the information on our website.

Vehicle equipment information

Displaying obstacle detection information

⚠CAUTION

This function is intended solely to assist the driver's vision. It does not detect all dangers and obstacles and is not a substitute for your attentiveness, judgement, and care while parking your vehicle.

- ❑ This function is only available for vehicles equipped with a parking sensor system.
- ❑ The "Parking Assist" screen is not displayed until this product boots up completely.

1 Turn on the parking assist sensor on your vehicle.

The "Parking Assist" screen appears.

Displaying the operating status of the climate control panel

When you operate the climate control panel of the vehicle, the screen switches automatically to the "A/C Control" screen.

- ❑ The settings of the climate control panel operated before this product is started are not displayed on the screen.
- ❑ Any climate control panel settings of the vehicle that are turned off are not displayed on the screen.
- ❑ If the information displayed on the screen is reversed for the left and right sides of the vehicle, change the "Climate Reverse" setting to "On".
 - Refer to *Reversing the climate control status display* on page 60

System settings

Displaying the "System" setting screen

- 1 Press the  button.
- 2 Touch , and then .

Setting the navigation information bar

You can set whether to display the guidance information of the navigation on the AV operation screen.

- 1 Display the "System" setting screen.
 - Refer to *Displaying the "System" setting screen* on page 58
- 2 Touch [Navigation Related Settings].
- 3 Touch [Navigation info window] to switch "On" or "Off".

Setting navigation screen interruption

You can set whether to automatically switch to the navigation screen from the AV screen or the application screen when your vehicle approaches a guidance point such as an intersection.

- 1 Display the "System" setting screen.
 - Refer to *Displaying the "System" setting screen* on page 58
- 2 Touch [Navigation Related Settings].
- 3 Touch [AV/App Guide Mode] to switch "On" or "Off".

Setting Bluetooth audio source activation

The default setting is "On".

- 1 Display the "System" setting screen.
 - Refer to *Displaying the "System" setting screen* on page 58
- 2 Touch [AV Source Settings].
- 3 Touch [Bluetooth Audio] to switch "On" or "Off".

Setting the ever scroll

When "Ever Scroll" is set to "On", the recorded text information scrolls continuously in the display while the vehicle is stopped. The default setting is "Off".

- 1 Display the "System" setting screen.
 - Refer to *Displaying the "System" setting screen* on page 58
- 2 Touch [Ever Scroll] to switch "On" or "Off".

Setting the beep tone

The default setting is "On".

- 1 Display the "System" setting screen.
 - Refer to *Displaying the "System" setting screen* on page 58
- 2 Touch [Beep Tone] to switch "On" or "Off".

Setting the rear view camera

A separately sold rear view camera (e.g. ND-BC8) is required for utilising the rear view camera function. (For details, consult your dealer.)

Rear view camera

This product features a function that automatically switches to the full-screen image of the rear view camera installed on your vehicle, when the gearstick is in the REVERSE (R) position.

Camera View mode also allows you to check what is behind you while driving.

Camera for Camera View mode

Camera View can be displayed at all times. Please note that with this setting, the camera image is not resized to fit, and that a portion of what is seen by the camera is not viewable.

To display the camera image, touch [Camera View] on the AV source selection screen.

- Refer to *Source on the AV source selection screen* on page 9
- ❑ To set the rear view camera as the camera for Camera View mode, set "Back Camera Input" to "On".
- ❑ When using the 2nd camera, set "AV Input" to "Camera".

⚠CAUTION

Check to make sure settings for rear view camera displays a mirror reversed image.

- ❑ Immediately verify whether the display changes to a rear view camera image when the gearstick is moved to REVERSE (R) from another position.

System settings

- ❑ When the screen changes to full-screen rear view camera image during normal driving, switch to the opposite setting in **"Reverse Gear Setting."**.
- ❑ If you touch [⏻] while the camera image is displayed, the displayed image will turn off temporarily.
- ❑ When the camera view of both the rear view camera and 2nd camera are available, the key to switch the display appears. Touch this key to switch the display between the rear view image and 2nd camera image.

Setting rear view camera activation

The default setting is **"Off"**.

- 1 **Display the "System" setting screen.**
 - Refer to *Displaying the "System" setting screen* on page 58
- 2 **Touch [Camera settings].**
- 3 **Touch [Back Camera: Reverse Video] to switch "On" or "Off".**

Setting the polarity of the rear view camera

The default setting is **"Battery"**.

- 1 **Display the "System" setting screen.**
 - Refer to *Displaying the "System" setting screen* on page 58
- 2 **Touch [Camera settings].**
- 3 **Touch [Reverse Gear Setting].**
 - **Battery:**
The polarity of the connected lead is positive.
 - **Ground:**
The polarity of the connected lead is negative.
- ❑ If no camera connection is made and the camera polarity setting is wrong, a black screen is displayed as the rear view camera image immediately after startup. In such a case, press and hold the **MAP** button to release the rear view camera screen and then change the camera polarity setting to **"Battery"**.

Setting the reversed image display for the rear view image

You can set whether to reverse the rear view camera images to be displayed on the front screen.
The default setting is **"Off"**.

- ❑ This setting is available only when you stop your vehicle in a safe place and apply the handbrake.
- ❑ This function is available when **"Back Camera Input"** is set to **"On"**.
 - Refer to *Setting rear view camera activation* on page 59

- 1 **Display the "System" setting screen.**
 - Refer to *Displaying the "System" setting screen* on page 58
- 2 **Touch [Camera settings].**
- 3 **Touch [Back Camera: Reverse Video] to switch "On" or "Off".**

Setting the parking assist guidelines

Displaying the parking assist guidelines

You can set whether to display the parking assist guidelines on the rear view camera images when backing up your vehicle.
The default setting is **"Off"**.

- 1 **Display the "System" setting screen.**
 - Refer to *Displaying the "System" setting screen* on page 58
- 2 **Touch [Camera settings].**
- 3 **Touch [Parking Assist Guide] to switch "On" or "Off".**

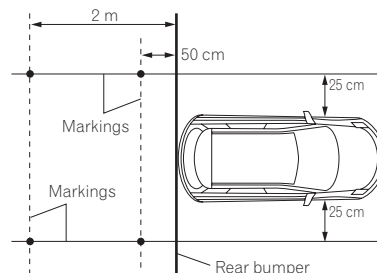
Adjusting the parking assist guidelines

⚠CAUTION

- When adjusting the guidelines, be sure to park the vehicle in a safe place and apply the handbrake.
- Before getting out of the car to place the markings, be sure to turn the ignition switch off (ACC OFF).
- The range projected by the rear view camera is limited. Also, the vehicle width and distance guidelines displayed on the rear view camera image may differ from the actual vehicle width and distance. (The guidelines are straight lines.)
- The image quality may deteriorate depending on the usage environment, such as at night or in dark surroundings.

- 1 **Park your vehicle in a safe place and apply the handbrake.**

- 2 **Using packing tape or similar, place markings as follows.**



- 3 **Display the "System" setting screen.**
 - Refer to *Displaying the "System" setting screen* on page 58
- 4 **Touch [Camera settings].**
- 5 **Touch [Parking Assist Guide Adjust].**
- 6 **Set the guidelines by dragging the four points.**
Adjust the guidelines so that the guidelines can be overlaid to the markings
 - ❑ Touch ▲/▼/◀/▶/↶/↷ to adjust the guidelines if necessary. Touch [Default] to reset the settings.

Setting the second camera

You can view images of the second camera (a front camera etc.) on the screen of this product.

Setting the second camera activation

The default setting is **"Off"**.

- ❑ This function is synchronized with **"AV Input"** setting.

- 1 **Display the "System" setting screen.**
 - Refer to *Displaying the "System" setting screen* on page 58
- 2 **Touch [Camera settings].**
- 3 **Touch [2nd Camera Input] to switch "On" or "Off".**

System settings

Setting the reversed image

The default setting is "Off".

- ❑ This setting is available only when you stop your vehicle in a safe place and apply the handbrake.
- ❑ This function is available when "AV Input" is set to "Camera" or "2nd Camera Input" is set to "On".

1 Display the "System" setting screen.

- Refer to *Displaying the "System" setting screen* on page 58

2 Touch [Camera settings].

3 Touch [2nd Camera: Reverse video] to switch "On" or "Off".

Setting the camera for Camera View mode

To display Camera View at all times, "Camera View" needs to be set to "On". (The same mode is turned on when [📺] is touched on the camera view screen. The setting value is synchronized.) The default setting is "Off".

- ❑ To set the rear view camera as the camera for Camera View mode, set "Back Camera Input" to "On".
 - Refer to *Setting rear view camera activation* on page 59
- ❑ When using the second camera, set "AV Input" to "Camera" or "2nd Camera Input" to "On" (both settings are synchronized).
 - Refer to *Setting the second camera* on page 59

1 Display the "System" setting screen.

- Refer to *Displaying the "System" setting screen* on page 58

2 Touch [Camera settings].

3 Touch [Camera View] to switch "On" or "Off".

- ❑ You can also turn this function on by touching [Camera View] on the AV source selection screen or in the source list.

Setting the safe mode

You can set the safe mode that regulate operating some functions only when you stop your vehicle in a safe place and apply the handbrake.

The default setting is "On".

1 Display the "System" setting screen.

- Refer to *Displaying the "System" setting screen* on page 58

2 Touch [Safe Mode] to switch "On" or "Off".

Setting the demo mode

The default setting is "On".

1 Display the "System" setting screen.

- Refer to *Displaying the "System" setting screen* on page 58

2 Touch [Demo Mode] to switch "On" or "Off".

Selecting the system language

- ❑ If the embedded language and the selected language setting are not the same, text information may not display properly.
- ❑ Some characters may not be displayed properly.

1 Display the "System" setting screen.

- Refer to *Displaying the "System" setting screen* on page 58

2 Touch [System Language].

3 Touch the language.

Reversing the climate control status display

When the optional vehicle bus adapter is connected, the left/right display of the climate control status screen can be reversed if the display does not match that of the vehicle.

The default setting is "Off".

1 Display the "System" setting screen.

- Refer to *Displaying the "System" setting screen* on page 58

2 Touch [Climate Reverse] to switch "On" or "Off".

Setting the keyboard language with the application for iPhone

You can use the keyboard in AppRadio Mode by setting the language of the keyboard for iPhone.

- ❑ This function is only available in AppRadio Mode on the iPhone.

1 Display the "System" setting screen.

- Refer to *Displaying the "System" setting screen* on page 58

2 Touch [Keyboard].

3 Touch the language.

Adjusting the response positions of the touch panel (touch panel calibration)

F80DAB

F980DAB

F980BT

If you feel that the touch panel keys on the screen deviate from the actual positions that respond to your touch, adjust the response positions of the touch panel screen.

- ❑ This setting is available only when you stop your vehicle in a safe place and apply the handbrake.
- ❑ Do not use sharp pointed tools such as a ballpoint or mechanical pen, which could damage the screen.
- ❑ Do not turn off the engine while saving the adjusted position data.

1 Display the "System" setting screen.

- Refer to *Displaying the "System" setting screen* on page 58

2 Touch [Touch Panel Calibration].

3 Touch two corners of the screen along the arrows, and then touch the centres of two + marks at the same time twice.

4 Press the button.

The adjustment results are saved.

5 Press the button once again.

Proceed to 16-point adjustment.

6 Gently touch the centre of the "+" mark displayed on the screen.

The target indicates the order.

- When you press the  button, the previous adjustment position returns.
- When you press and hold the  button, the adjustment is cancelled.

7 Press and hold the button.

The adjustment results are saved.

System settings

Setting the dimmer

Setting the dimmer trigger

The default setting is "Auto".

- ❑ This setting is available only when you stop your vehicle in a safe place and apply the handbrake.

1 Display the "System" setting screen.

- Refer to *Displaying the "System" setting screen* on page 58

2 Touch [Dimmer Settings].

3 Touch [Dimmer Trigger].

4 Touch the item.

- **Auto:**
Switches the dimmer to on or off automatically according to your vehicle's headlight turning on or off.
- **Manual:**
Switches the dimmer to on or off manually.
- **Time:**
Switches the dimmer to on or off at the time you adjusted.

Setting the dimmer duration in day or night

The default setting is "Day".

- ❑ You can use this function when "Dimmer Trigger" is set to "Manual".
- ❑ This setting is available only when you stop your vehicle in a safe place and apply the handbrake.

1 Display the "System" setting screen.

- Refer to *Displaying the "System" setting screen* on page 58

2 Touch [Dimmer Settings].

3 Touch [Day/Night] to switch the following items.

- **Day:**
Turns the dimmer function to off.
- **Night:**
Turns the dimmer function to on.

Setting the dimmer duration optional

You can adjust the time that the dimmer is turned on or off. The default setting is 18:00-6:00 (6:00 PM-6:00 AM).

- ❑ You can use this function when "Dimmer Trigger" is set to "Time".
- ❑ This setting is available only when you stop your vehicle in a safe place and apply the handbrake.

1 Display the "System" setting screen.

- Refer to *Displaying the "System" setting screen* on page 58

2 Touch [Dimmer Settings].

3 Touch [Dimmer Duration].

4 Drag the cursors to set the dimmer duration.

- You can also set the dimmer duration touching  or .
- ❑ The time display of the dimmer duration adjusting bar is depending on the clock display setting.
- Refer to *Setting the time and date* on page 69

Adjusting the picture

You can adjust the picture for each source and rear view camera.

⚠CAUTION

For safety reasons, you cannot use some of these functions while your vehicle is in motion. To enable these functions, you must stop in a safe place and apply the handbrake.

1 Display the screen you want to adjust.

2 Display the "System" setting screen.

- Refer to *Displaying the "System" setting screen* on page 58

3 Touch [Picture Adjustment].

4 Touch the item to select the function to be adjusted.

- **Brightness:**
Adjusts the black intensity. (-24 to +24)
- **Contrast:**
Adjusts the contrast. (-24 to +24)
- **colour:**
Adjusts the colour saturation. (-24 to +24)
- **Hue:**
Adjusts the tone of colour (which colour is emphasised, red or green). (-24 to +24)
- **Dimmer Level:**
Adjusts the brightness of the display. (+1 to +48)
- **Temperature:**
Adjusts the colour temperature, resulting in a better white balance. (-3 to +3)

- ❑ With some pictures, you cannot adjust "Hue" and "colour".

- When you touch [Rear View] or [2nd Camera], the mode changes to the selected camera mode. By touching [Source], [Navi] or [Apps], you can return to the selected mode.

5 Touch , , , to adjust.

- ❑ The adjustments of "Brightness", "Contrast" and "Dimmer Level" are stored separately for the on/off status of the dimmer function. These are switched automatically depending on whether the dimmer function is on or off.
- ❑ The picture adjustment may not be available with some rear view cameras.
- ❑ The setting contents can be memorised separately.

Displaying the firmware version

1 Display the "System" setting screen.

- Refer to *Displaying the "System" setting screen* on page 58

2 Touch [System Information].

3 Touch [Firmware Information].

Displaying the open source licences

You can check the open source licenses of the functions that this product is equipped with.

1 Display the "System" setting screen.

- Refer to *Displaying the "System" setting screen* on page 58

2 Touch [System Information].

3 Touch [Firmware Information].

4 Touch [Licence].

Updating firmware

⚠CAUTION

- The external storage device for updating must contain only the correct update file.
- Never turn this product off, eject the SD memory card or disconnect the USB storage device while the firmware is being updated.

System settings

- You can only update the firmware when the vehicle is stopped and the handbrake is engaged.

- 1 **Download the firmware update files into your computer.**
- 2 **Connect a blank (formatted) storage device to your computer, and then locate the correct update file and copy it onto the storage device.**
- 3 **Set the external storage device to this product.**
 - Refer to *Inserting and ejecting an SD memory card* on page 6
 - Refer to *Plugging and unplugging a USB storage device* on page 6
- 4 **Turn the source off.**
 - Refer to *Selecting a source* on page 9
- 5 **Display the "System" setting screen.**
 - Refer to *Displaying the "System" setting screen* on page 58
- 6 **Touch [System Information].**
- 7 **Touch [Firmware Update].**
- 8 **Touch [Continue] to display the data transfer mode.**

Follow the on-screen instructions to finish updating the firmware.

- If an error message appears on the screen, touch the display and perform the above steps again.

Checking sensor learning status and driving status

You can check the sensor learning status, such as the degree of learning. You can also check the current sensor values and the total number of speed pulses.

- 1 **Display the "System" setting screen.**
 - Refer to *Displaying the "System" setting screen* on page 58
- 2 **Touch [System Information].**
- 3 **Touch [3D Calibration Status].**

Clearing the status

You can delete the learned results stored in the sensor.

- 1 **Display the "3D Calibration Status" screen.**
- 2 **Touch [Distance] or [Speed Pulse], and then touch [Yes].**
- 3 **Touch [Learning] and then touch [Reset All].**
 - Touch [Reset All] to reset the sensor after changing the installation position or angle.
 - If you touch [Reset Distance], all learned results stored in "Distance" are cleared.

Checking the connections of leads

Check that the leads are properly connected between this product and vehicle.

- 1 **Display the "System" setting screen.**
 - Refer to *Displaying the "System" setting screen* on page 58
- 2 **Touch [System Information].**
- 3 **Touch [Connection Status].**
 - **GPS Antenna**
Displays the connection status of the GPS aerial ("OK" or "NOK") and the reception sensitivity.
 - If reception is poor, please change the installation position of the GPS aerial.
 - **Positioning Status**
Displays the positioning status (3D positioning, 2D positioning, or no positioning), the number of satellites used for positioning (orange), and the number of satellites whose signal has been received (yellow). If signals from more than three satellites are received, the current location can be measured.
 - Refer to *Positioning technology* on page 75
 - **Installation**
Indicates whether the installation position of this product is correct or not. If installed correctly, "OK" appears. When this product is installed at an extreme angle exceeding the limitation of the installing angle, "NOK(Inst. Angle)" will be displayed. If the installation of this product is continually changed and it is not firmly fixed into place, "NOK(Vibration)" will be displayed.
 - **Speed Pulse**
The speed pulse value detected by this product is shown.
 - **Illumination**
Displays the status of headlights or small lamps of the vehicle.
 - **Back Signal**
When the gearstick is shifted to "R" (reverse position), the signal switches to "High" or "Low". The signal displayed will vary depending on the vehicle.
 - **Vehicle Bus(*1)**
Displays the status of the vehicle bus adapter.
 - (*1) **F88DAB/F80DAB/F980DAB/F9880DAB**

Audio adjustments

Displaying the “Audio” setting screen

- 1 Press the **⏏** button.
- 2 Touch **[⏏]**, and then **[⏏]**.

Using fader/balance adjustment

- 1 Display the “Audio” setting screen.
➤ Refer to *Displaying the “Audio” setting screen* on page 63
- 2 Touch **[Fader/Balance]**.
 - Only the balance can be adjusted when “On” is selected in “Rear Speaker”. Touch **[Balance]** and skip to step 4.➤ Refer to *Setting the rear speaker output* on page 63.
- 3 Touch **[▲]** or **[▼]** to adjust the front/rear speaker balance.
 - Set “Front” and “Rear” to “0” when using a dual speaker system.
- 4 Touch **[◀]** or **[▶]** to adjust the left/right speaker balance.
 - You can also set the value by dragging the point on the displayed table.

Switching sound muting/attenuation

You can automatically mute or attenuate the AV source volume and the iPhone or smartphone application volume when the navigation outputs the guidance voice.
The default setting is “ATT”.

- 1 Display the “Audio” setting screen.
➤ Refer to *Displaying the “Audio” setting screen* on page 63
- 2 Touch **[Mute Level]**.
- 3 Touch the item.
 - **ATT:**
The volume becomes 20 dB lower than the current volume.
 - **Mute:**
The volume becomes 0.
 - **Off:**
The volume does not change.

Adjusting source levels

SLA (source level adjustment) lets you adjust the volume level of each source to prevent radical changes in volume when switching between sources.

- Settings are based on the FM tuner volume level, which remains unchanged.
- This function is not available when the FM tuner is selected as the AV source.

- 1 Compare the FM tuner volume level with the level of the source.
- 2 Display the “Audio” setting screen.
➤ Refer to *Displaying the “Audio” setting screen* on page 63
- 3 Touch **[Source Level Adjuster]**.
- 4 Touch **[▲]** or **[▼]** to adjust the source volume.
 - If you directly touch the area where the cursor can be moved, the SLA setting will be changed to the value of the touched point.
 - “+4” to “-4” is displayed as the source volume is increased or decreased.
 - The default setting is “0”.

Setting the rear speaker output

A rear speaker output of this product can be turned on or off. The default setting is “On”.

- 1 Display the “Audio” setting screen.
➤ Refer to *Displaying the “Audio” setting screen* on page 63
- 2 Touch **[Rear Speaker]** to switch “On” or “Off”.
 - If “Off” is selected, the rear speaker adjustment is not available in “Speaker Level”, “Time Alignment” and “Crossover”.

Setting the subwoofer output

This product is equipped with a subwoofer output mechanism, which can be turned on or off. The default setting is “On”.

- 1 Display the “Audio” setting screen.
➤ Refer to *Displaying the “Audio” setting screen* on page 63
- 2 Touch **[Subwoofer]** to switch “On” or “Off”.
 - If “Off” is selected, the rear speaker adjustment is not available in “Speaker Level”, “Time Alignment” and “Crossover”.

Adjusting the cutoff frequency value

You can adjust the cutoff frequency value of each speaker. The following speakers can be adjusted:

Front, Rear, Subwoofer

- “Rear” is available only when “Rear Speaker” is set to “On”.
➤ Refer to *Setting the rear speaker output* on page 63
- “Subwoofer” is available only when “Subwoofer” is set to “On”.
➤ Refer to *Setting the subwoofer output* on page 63

- 1 Display the “Audio” setting screen.
➤ Refer to *Displaying the “Audio” setting screen* on page 63
- 2 Touch **[Crossover] or [Subwoofer Settings]**.
- 3 Touch **[<]** or **[>]** to switch the speaker.
- 4 Drag the graph line to set the cutoff position.
- 5 Drag the lowest point of the graph to set the cutoff slope.
 - The following items can also be set.
 - **Phase** **[↔]**
Switches the subwoofer phase between normal and reverse position.
 - **LPF/HPF:**
Switches the LPF/HPF setting to “On” or “Off”.
When it is turned off, the high-pass filter or low-pass filter of each speaker can also be turned on by touching the graph lines.

Selecting the listening position

You can select a listening position that you want to make as the centre of sound effects. The default setting is “Off”.

- 1 Display the “Audio” setting screen.
➤ Refer to *Displaying the “Audio” setting screen* on page 63
- 2 Touch **[Listening Position]**.
- 3 Touch the desired position to change the listening position.
The following items are available:
Off, Front-L, Front-R, Front, All.

Audio adjustments

Adjusting the speaker output levels finely

Fine adjustments of the speaker output level can be made by listening to audio output.

1 Display the "Audio" setting screen.

➔ Refer to *Displaying the "Audio" setting screen* on page 63

2 Touch [Speaker Level].

3 Touch [<] or [>] to select the listening position if necessary.

The following items are available:

Off, Front-L, Front-R, Front, All.

- ☐ The default setting is "Off".
- ☐ If you change the setting for the listening position, the output levels of all the speakers will change according to the setting.

4 Touch [<] or [>] to adjust the speaker output level.

- ☐ "-24" dB to "10" dB is displayed as the level to be corrected is increased or decreased.

The following items are available:

Front Left, Front Right, Rear Left, Rear Right, Subwoofer

- ☐ If the Auto EQ measurement has been done, the result of the Auto EQ measurement will be applied by touching [Apply Auto EQ] (the results are also applied to some settings simultaneously).

Adjusting the time alignment

By adjusting the distance from each speaker to the listening position, time alignment is able to correct the time required for sound to reach the listening position.

1 Measure the distance between the head of the listener and each speaker unit.

2 Display the "Audio" setting screen.

➔ Refer to *Displaying the "Audio" setting screen* on page 63

3 Touch [Time Alignment].

4 Touch [<] or [>] to select the listening position if necessary.

The following items are available:

Off, Front-L, Front-R, Front, All.

- ☐ The default setting is "Off".
- ☐ If you change the listening position setting, the distance value of all the speakers will change in conjunction with the setting.

5 Touch [<] or [>] to input the distance between the selected speaker and the listening position.

The following items are available:

Front Left, Front Right, Rear Left, Rear Right, Subwoofer

- ☐ You can input the value between 0 cm and 500 cm.
- ☐ The distance can be adjusted manually only when the listening position setting is set to "Front-L" or "Front-R".
- ☐ If the Auto EQ measurement has been done, the result of the Auto EQ measurement will be applied by touching [Apply Auto EQ] (the results are also applied to some settings simultaneously).
- ☐ If you touch [TA On], the time alignment is turned off mandatorily.

Using the equaliser

Recalling equaliser curves

There are multiple equalizer curves that you can easily recall at any time. The equalizer curves you can recall are as follows:

S.Bass, Powerful, Natural, Vocal, Flat, Custom1 and Custom2

- ☐ The default setting is "Powerful".

1 Display the "Audio" setting screen.

➔ Refer to *Displaying the "Audio" setting screen* on page 63

2 Touch [Graphic EQ].

3 Touch the equalizer curve name.

Customising the equaliser curves

- ☐ If the preset equalizer curve other than "Custom1" or "Custom2" is modified, the equalizer curve settings in "Custom1" will be overwritten.
- ☐ If the equalizer curve stored in "Custom1" or "Custom2" is modified, each stored curve will be overwritten.

1 Display the "Audio" setting screen.

➔ Refer to *Displaying the "Audio" setting screen* on page 63

2 Touch [Graphic EQ].

3 Select a curve that you want to use as the basis of customising.

4 Touch the frequency for which you want to adjust the level.

- ☐ If you touch "Custom1" or "Custom2", recall the equalizer curve currently stored in "Custom1" or "Custom2".

- ☐ If you trail a finger across the bars of multiple equaliser bands, the equaliser curve settings will be set to the value of the touched point on each bar.

Setting the auto-adjusted equaliser

You can set the auto-adjusted equalizer to suit the vehicle's acoustics. To use this function, the Auto EQ measurement must be done in advance.

➔ Refer to *Adjusting the equaliser curve automatically (Auto EQ)* on page 64

The default setting is "Off".

1 Display the "Audio" setting screen.

➔ Refer to *Displaying the "Audio" setting screen* on page 63

2 Touch [Auto EQ&TA] to switch "On" or "Off".

Adjusting the equaliser curve automatically (Auto EQ)

By measuring the vehicle's acoustics, the equaliser curve can be adjusted automatically to suit the vehicle interior.

⚠WARNING

A loud tone (noise) may be emitted from the speakers when measuring the vehicle's acoustics. Never perform Auto EQ measurement while driving.

⚠CAUTION

- Thoroughly check the conditions before performing Auto EQ, as the speakers may be damaged if this is performed under the following conditions:
 - When the speakers are incorrectly connected. (For example, when a rear speaker is connected as a subwoofer output.)
 - When a speaker is connected to a power amp delivering output higher than the speaker's maximum input power capability.
- If a microphone for acoustical measurement (sold separately) is not placed in an appropriate location, the measurement tone may become loud and measurement may take a long time, resulting in battery drainage. Be sure to place the microphone in the specified location.

Before operating the Auto EQ function

- Perform Auto EQ in as quiet a place as possible, with the vehicle engine and air conditioning switched off. Also, cut

Audio adjustments

power to car phones or mobile phones in the vehicle, or remove them in advance. Surrounding sounds may prevent correct measurement of the vehicle's acoustics.

- Be sure to use the microphone for acoustical measurement (sold separately). Using another microphone may prevent measurement, or result in incorrect measurement of the vehicle's acoustics.
- To perform Auto EQ, the front speakers must be connected.
- When this product is connected to a power amp with input level control, Auto EQ may be impossible if the power amp's input level is set below the standard level.
- When this product is connected to a power amp with an LPF (low pass filter), turn the LPF off before performing Auto EQ. Also, set the cut-off frequency for the built-in LPF of an active subwoofer to the highest frequency.
- The distance has been calculated by a computer to provide optimum delay to ensure accurate results. Do not change this value.
 - The reflected sound within the vehicle is strong and delays occur.
 - The LPF on active subwoofers or external amps delay the lower sounds.
- If an error occurs during measurement, check the following before measuring the vehicle's acoustics.
 - Front speakers (left/right)
 - Rear speakers (left/right)
 - Noise
 - Microphone for acoustical measurement (sold separately)
 - Low battery

Performing Auto EQ

⚠CAUTION

Do not turn off the engine while the measurement is in progress.

- ☐ Auto EQ changes the audio settings as follows:
 - The fader/balance settings return to the centre position.
- ➡ Refer to *Using fader/balance adjustment* on page 63
- "Mute Level" is set to "Off".
- ➡ Refer to *Switching sound muting/attenuation* on page 63
- ☐ Previous settings for Auto EQ will be overwritten.

1 Stop the vehicle in a quiet place, close all the doors, windows and sun roof, and then turn the engine off.

If the engine is left running, engine noise may prevent correct Auto EQ.

- ☐ If driving restrictions are detected during measurement, measurement is cancelled.

2 Fix the microphone for acoustical measurement (sold separately) in the centre of the headrest of the driver's seat, facing forwards.

The Auto EQ may differ depending on where you place the microphone. If desired, place the microphone on the front passenger seat and perform Auto EQ.

3 Disconnect the iPhone or smartphone device.

4 Turn on the ignition switch (ACC ON).

If the vehicle's air conditioner or heater is turned on, turn it off.

5 Turn the source off.

➡ Refer to *Selecting a source* on page 9

6 Display the "Audio" setting screen.

➡ Refer to *Displaying the "Audio" setting screen* on page 63

7 Touch [A-EQ&TA Measurement].

8 Connect the microphone for acoustical measurement (sold separately) with this product.

F88DAB F80DAB

Plug the microphone into the auto EQ microphone input jack on this product.

➡ Refer to *Checking part names and functions* on page 4

F980DAB F980BT

Plug the microphone into the AUX input jack on the back panel of this product.

➡ Refer to the Installation Manual.

- ☐ Use an extension cable (sold separately) if the cord of the Microphone (sold separately) is not long enough.

9 Touch [Front Left] or [Front Right] to select the current listening position.

10 Touch [Start].

A 10-second countdown starts.

- ☐ The Bluetooth connection is disconnected before the process starts.

11 Exit the vehicle and keep the doors closed until the countdown finishes.

When the countdown finishes, a measurement tone (noise) is emitted from the speakers and the Auto EQ measurement begins.

12 Wait until the measurement is completed.

When Auto EQ is completed, a message is displayed.

- ☐ The measurement time varies depending on the type of vehicle.

- To stop the measurement, touch [Stop].

13 Store the microphone carefully in the glove box or another safe place.

If the microphone is subjected to direct sunlight for an extended period, high temperatures may cause distortion, colour change or malfunction.

Using the automatic sound levelizer

During driving, noise in the car changes according to the driving speed and road conditions. ASL (automatic sound levelizer) monitors such varying noise and automatically increases the volume level, if this noise becomes greater. The sensitivity (variation of volume level to noise level) of ASL can be set to one of five levels.

1 Display the "Audio" setting screen.

➡ Refer to *Displaying the "Audio" setting screen* on page 63

2 Touch [ASL].

3 Touch the desired level.

Theme menu

Displaying the “Theme” setting screen

- 1 Press the  button.
- 2 Touch , and then .

Selecting the wallpaper

The wallpaper can be selected from some preset items. Furthermore, you can set your original pictures.

- 1 Display the “Theme” screen.
 - Refer to *Displaying the “Theme” setting screen* on page 66
 - 2 Touch [Background].
 - 3 Touch [Home] or [AV] to switch the screen displays.
- The setting contents can be memorized separately for the AV operation screen and the top menu screen.
- 4 Touch the item.
 - Preset displays: Selects the desired preset background display.
 -  (custom): Displays the background display image imported from the external storage device.
 - Refer to *Changing to the wallpaper stored on the external storage device* on page 66
 -  (off): Hides the background display.

Changing to the wallpaper stored on the external storage device

⚠CAUTION

Do not turn off the engine while importing an image from the external storage device.

- Background display image must be used within the following formats.
 - JPEG image files (.jpg or .jpeg)
 - Allowable data size is 10 MB or smaller
 - Allowable image size is 4 000 pixels × 4 000 pixels or smaller

- 1 Set the external storage device.
 - Refer to *Inserting and ejecting an SD memory card* on page 6
 - Refer to *Plugging and unplugging a USB storage device* on page 6
- 2 Display the “Theme” screen.

- Refer to *Displaying the “Theme” setting screen* on page 66
- 3 Touch [Background].
 - 4 Touch .
 - 5 Touch the desired external storage device.
 - 6 Touch the image.

Setting the illumination colour

The illumination colour can be selected from some preset colors. Furthermore, the illumination can be switched between these colors in order.

Selecting the colour from the preset colours

You can select an illumination colour from the colour list.

- 1 Display the “Theme” screen.
 - Refer to *Displaying the “Theme” setting screen* on page 66
- 2 Touch [Illumination].
- 3 Touch the colour.
 - Coloured keys: Selects the desired preset colour.
 -  (custom): Displays the screen to customise the illumination colour.
 - Refer to *Creating a user-defined colour* on page 66
 -  (rainbow): Shifts gradually between the preset colors in sequence.

Creating a user-defined colour

You can create a user-defined colour. The created colour is stored, and you can select the colour when setting the illumination colour the next time.

- 1 Display the “Theme” screen.
 - Refer to *Displaying the “Theme” setting screen* on page 66
- 2 Touch [Illumination].
- 3 Touch .
- 4 Drag the colour bar to adjust the colour tone.
 - You can also adjust the colour tone by touching  or .
- 5 Touch and hold [Memo] to store the customised colour in the memory.

The customised colour is stored in the memory.

The set colour will be recalled from the memory the next time you touch the same key.

Selecting the theme colour

- 1 Display the “Theme” screen.
 - Refer to *Displaying the “Theme” setting screen* on page 66
- 2 Touch [Theme].
- 3 Touch the colour.
 - You can preview the top menu screen or the AV operation screen by touching [Home] or [AV] respectively.

Selecting the style of the clock

- 1 Display the “Theme” screen.
 - Refer to *Displaying the “Theme” setting screen* on page 66
- 2 Touch [Clock].
- 3 Touch the item.
 - Preset images: Selects the desired preset style for the clock.
 -  (off): Hides the clock display.

Changing the preinstalled splash screen

You can change the splash screen to other images preinstalled in this product.

- 1 Display the “Theme” screen.
 - Refer to *Displaying the “Theme” setting screen* on page 66
- 2 Touch [Splash Screen].
- 3 Touch the item.
 - Preset images: Selects the desired preset splash screen image.
 -  (custom): Displays the splash screen image imported from the external storage device.
 - Refer to *Changing to the splash screen stored on the external storage device* on page 67

Theme menu

Changing to the splash screen stored on the external storage device

⚠ CAUTION

Do not turn off the engine while importing an image from the external storage device.

1 Set the external storage device.

- Refer to *Inserting and ejecting an SD memory card* on page 6
- Refer to *Plugging and unplugging a USB storage device* on page 6

2 Display the "Theme" screen.

- Refer to *Displaying the "Theme" setting screen* on page 66

3 Touch [Splash Screen].

4 Touch .

5 Touch the desired external storage device.

6 Touch the image.

Replicating the settings

You can export settings you have made on the "Theme" screen to an external storage device. Also, you can import them from an external storage device.

⚠ CAUTION

Do not turn off the engine while exporting or importing the settings.

- ❑ If multiple external storage devices that include available data are connected to this product, the order of priority for the targets that the "Theme" settings are exported to or imported from is as follows:

F88DAB **F80DAB**

- ① SD memory card
- ② USB storage device (USB port 1)
- ③ USB storage device (USB port 2)

F980DAB **F980BT**

- ① USB storage device (USB port 1)
 - ② USB storage device (USB port 2)
- ❑ This setting is available only when you stop your vehicle in a safe place and apply the handbrake.

Exporting "Theme" settings

1 Set the external storage device.

- Refer to *Inserting and ejecting an SD memory card* on page 6
- Refer to *Plugging and unplugging a USB storage device* on page 6

2 Display the "Theme" screen.

- Refer to *Displaying the "Theme" setting screen* on page 66

3 Touch [Export].

4 Touch the item you want to export.

The following items are available:

Illumination, Theme, Splash Screen, Select All

5 Touch [Export].

Importing "Theme" settings

1 Set the external storage device.

- Refer to *Inserting and ejecting an SD memory card* on page 6
- Refer to *Plugging and unplugging a USB storage device* on page 6

A message confirming whether to import the stored setting data appears.

2 Touch [Import].

Video settings

Setting up the video player

This setting is available only when "Disc" is selected as the source.

Displaying the "DVD/DivX Setup" screen

1 Press the button.

2 Touch , and then .

3 Touch [DVD/DivX Setup].

Setting the top-priority languages

You can assign the top-priority language to the top-priority subtitle, audio and menu in initial playback. If the selected language is recorded on the disc, subtitles, audio and menu are displayed or output in that language.

1 Display the "DVD/DivX Setup" screen

- Refer to *Displaying the "DVD/DivX Setup" screen* on page 67

2 Touch [Subtitle Language], [Audio Language] or [Menu Language].

3 Touch the desired language.

When you select "Others", a language code input screen is shown. Input the four-digit code of the desired language then touch .

- ❑ You can switch the language by touching the switch languages key during playback.
- ❑ The setting made here will not be affected even if the language is switched during playback using the appropriate key.

Setting the angle icon display

The angle icon can be set so it appears on scenes where the angle can be switched.
The default setting is "On".

1 Display the "DVD/DivX Setup" screen

- Refer to *Displaying the "DVD/DivX Setup" screen* on page 67

2 Touch [Multi Angle] to switch "On" or "Off".

Video settings

Setting the aspect ratio

There are two kinds of displays. A wide screen display has a width-to-height ratio (TV aspect) of 16:9, while a regular display has a TV aspect of 4:3. If you use a regular rear display with a TV aspect of 4:3, you can set the aspect ratio suitable for your rear display. (We recommend use of this function only when you want to fit the aspect ratio to the rear display.) The default setting is "16:9".

1 Display the "DVD/DivX Setup" screen

- Refer to *Displaying the "DVD/DivX Setup" screen* on page 67

2 Touch [TV Aspect].

3 Touch the item.

- **16:9**: Displays the wide screen image (16:9) as it is (initial setting).
- **Letter Box**: Makes the image in the shape of a letterbox with black bands on the top and bottom of the screen.
- **Pan Scan**: Cuts the image short on the right and left sides of the screen.
- When playing discs that do not have a panscan system, the disc is played back with "Letter Box" even if you select the "Pan Scan" setting. Confirm whether the disc package bears the  mark.
- The TV aspect ratio cannot be changed for some discs. For details, refer to the disc's instructions.

Setting parental lock

Some DVD-Video discs let you use parental lock to set restrictions so that children cannot watch violent or adult-oriented scenes. You can set the parental lock level in steps as desired.

- When you set a parental lock level and then play a disc featuring parental lock, code number input indications may be displayed. In this case, playback will begin when the correct code number is input.

1 Display the "DVD/DivX Setup" screen

- Refer to *Displaying the "DVD/DivX Setup" screen* on page 67

2 Touch [Parental].

3 Touch [0] to [9] to input a four-digit code number.

4 Touch .

5 Touch any number between [1] to [8] to select the desired level.

- The lower the level is set, the tighter the restriction is applied.
- The default setting is "8".

6 Touch .

- We recommend to keep a record of your code number in case you forget it.
- The parental lock level is recorded on the disc. You can confirm it by looking at the disc package, the included literature or the disc itself. You cannot use parental lock with discs that do not feature a recorded parental lock level.
- With some discs, parental lock operates to skip certain scenes only, after which normal playback resumes. For details, refer to the disc's instructions.

Displaying your DivX VOD registration code

If you want to play DivX® VOD (video on demand) content on this product, you must first register this product with your DivX VOD content provider. You do this by generating a DivX VOD registration code, which you submit to your provider.

- Keep a record of the code as you will need it when you register this product to the DivX VOD provider.

1 Display the "DVD/DivX Setup" screen

- Refer to *Displaying the "DVD/DivX Setup" screen* on page 67

2 Touch [DivX® VOD].

- If a registration code has already been activated, it cannot be displayed.

3 Touch [Registration Code].

Your 10-digit registration code is displayed.

- Make a note of the code as you will need it when you deregister from a DivX VOD provider.

Displaying your DivX VOD deregistration code

A registration code registered with a deregistration code can be deleted.

1 Display the "DVD/DivX Setup" screen

- Refer to *Displaying the "DVD/DivX Setup" screen* on page 67

2 Touch [DivX® VOD].

3 Touch [Deregistration Code].

Your 8-digit deregistration code is displayed.

- Make a note of the code as you will need it when you deregister from a DivX VOD provider.

Automatic playback of DVDs

When a DVD disc with a DVD menu is inserted, this product will cancel the menu automatically and start playback from the first chapter of the first title.

The default setting is "Off".

- Some DVDs may not operate properly. If this function is not fully operable, turn this function off and start playback.

1 Display the "DVD/DivX Setup" screen

- Refer to *Displaying the "DVD/DivX Setup" screen* on page 67

2 Touch [DVD Auto Play] to switch "On" or "Off".

Setting the video signal for the rear view camera

When you connect a rear view camera to this product, select the suitable video signal setting. The default setting is "Auto".

- You can operate this function only for the video signal input into the AV input.

1 Display the "Video Setup" screen.



2 Touch [Video Signal Setting].

3 Touch [Camera].

4 Touch the item.

The following items are available:

Auto, PAL, NTSC, PAL-M, PAL-N, SECAM.

Video settings

Setting the video output format

You can switch the video output format of the rear display between PAL and NTSC.
The default setting is "PAL".

- ❑ The video output format setting has no effect on "AUX", "AV", and "iPod" sources (when the control mode is set to iPod).
- ❑ This function is available when "Source OFF" is selected on the AV source, and a source for the rear display other than "Disc", "USB1", "USB2", and "SD" is selected.

- 1 Display the "DVD/DivX Setup" screen.
- 2 Refer to *Displaying the "DVD/DivX Setup" screen* on page 67
- 2 Touch [Video Output Format] to switch "PAL" or "NTSC".

Favourite menu

Registering your favourite menu items in shortcuts allows you to quickly jump to the registered menu screen by a simple touch on the "Favorites" screen.

- ❑ Up to 12 menu items can be registered in the favourite menu.

Creating a shortcut

- 1 Display the setting menu screen.



- 2 Touch the star icon of the menu item.

The star icon for the selected menu is filled in.

- To cancel the registration, touch the star icon in the menu column again.

Selecting a shortcut

- 1 Display the "Favorites" screen.



- 2 Touch the menu item.

Removing a shortcut

- 1 Display the "Favorites" screen.



- 2 Touch the favourite menu column.

The selected menu item is removed from the "Favorites" screen.

- You can also remove a shortcut by touching the registered menu column.
- ❑ In the favourite menu, "TA Interrupt" under "Radio Settings" and "DAB Settings" are managed as the same item.

Other functions

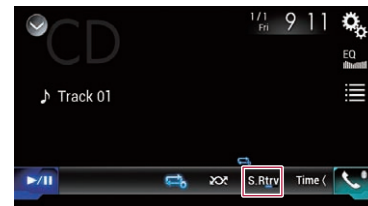
Setting the time and date

- 1 Touch the current time on the screen.
- 2 Touch one of the items to adjust.
 - ❑ You can change the time display format to "12hour" (default) or "24hour".
 - ❑ You can change the order of date display format: Day-month, Month-day.

Setting the "Sound Retriever" function

The "Sound Retriever" function automatically enhances compressed audio and restores rich sound.
The default setting is "Mode1".

- 1 Touch [S.Rtrv] to switch the settings.



- [S.Rtrv] (Mode1), [S.Rtrv] (Mode2): Activates the "Sound Retriever" function.
- ❑ Mode2 has a stronger effect than Mode1.
- [S.Rtrv] (Off): Deactivates the "Sound Retriever" function.

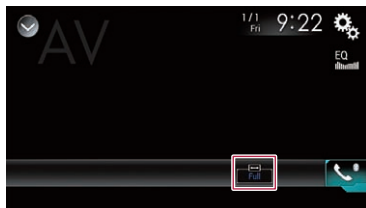
Changing the wide screen mode

The default setting is "Full", and for JPEG images is "Normal".

- ❑ JPEG can be set to either "Normal" or "Trimming" in wide screen mode.
- ❑ This setting is available only when you stop your vehicle in a safe place and apply the handbrake.

- 1 Touch the following key.

Other functions



2 Touch the desired mode.

- **Full:**
A 4:3 picture is enlarged in the horizontal direction only, enabling you to enjoy an image without any omissions.
 - **Zoom:**
A 4:3 picture is enlarged in the same proportion both vertically and horizontally.
 - **Normal:**
A 4:3 picture is displayed normally, without changing its proportion.
 - **Trimming**
An image is displayed across the entire screen with the horizontal-to-vertical ratio left as is. If the screen ratio differs from the image, the image may be displayed partly cut off either at the top/bottom or sides.
- ☐ Different settings can be stored for each video source.
 - ☐ When a video is viewed in a wide screen mode that does not match its original aspect ratio, it may appear different.
 - ☐ The video image will appear coarser when viewed in "Zoom" mode.

Storing song information to an iPod (iTunes® Tagging)

You can store song information to the iPod when this product receives song information. The songs will appear in a playlist called "Tagged playlist" in iTunes the next time you synchronize your iPod. You can directly buy the songs via iTunes.

- ☐ The iTunes® Tagging function is available when the song information is available.
- ☐ This function is available for the following iPod models:
iPhone 3G, 3GS, 4, 4s
iPod touch 1st, 2nd, 3rd, 4th generation
iPod classic 1st, 2nd generation
- ☐ The version of iTunes must be 7.4 or higher.

1 Display the "System" setting screen.

- ➔ Refer to *Displaying the "System" setting screen* on page 58

2 Touch [AV Source Settings].

3 Touch [Tag Forwarding] to select the USB port you use.

4 Tune into the broadcast station.

- ➔ Refer to *Radio* on page 37

5 Touch the song information.

The information on the song on air is stored in this product. When the information is acquired, turns off and is displayed.

- ☐ The song information for up to 50 songs can be stored in this product.

6 Connect your iPod.

The song information is transferred to your iPod.

- ☐ When your iPod is already connected, the song information will be transferred directly to your iPod every time you touch the song information.

Selecting the video for the rear display

You can choose either to show the same image as the front screen or to show the selected source on the rear display.

- ☐ Video files on the external storage device are not available as a source for the rear display when [Apple CarPlay] is activated in [Smartphone Setup].

F88DAB/F80DAB

- ☐ Video files on the external storage device are not available as a source for the rear display when [Android Auto] is activated in [Smartphone Setup].

1 Display the AV source selection screen.



2 Touch [Rear].

3 Touch the source you want to show on the rear display.

● Mirror

The video on the front screen of this product is output to the rear display.

- Not all videos or sounds can be output to the rear display.

● DVD/CD

The video and sound of a disc are output to the rear display.
— Compatible video types are DVD-V, Video-CD, DivX, MPEG-1, MPEG-2, and MPEG-4 only.

● USB/iPod1

The video and sound of the USB storage device or iPod are output to the rear display.

- The port that supports the rear display will only be USB port 1.

— Compatible file types are MPEG-4, H.264, WMV, MKV, and FLV only.

● SD (*1)

The video and sound of the SD memory cards are output to the rear display.

- Compatible file types are MPEG-4, H.264, WMV, MKV, and FLV only.

● AV

The video and/or sound of the AV input source are output to the rear display.

- The video image and sound are output only when "AV Input" is set to "Source".

➔ Refer to *Starting procedure (for AV source)* on page 55.

● Source OFF

Nothing is output to the rear display.

- ☐ (*1) F88DAB/F80DAB

Setting the anti-theft function

You can set a password for this product. If the back-up lead is cut after the password is set, this product prompts for the password at the time of next boot up.

❗ Important

If you forgot your password, contact the nearest authorized Pioneer Service Station.

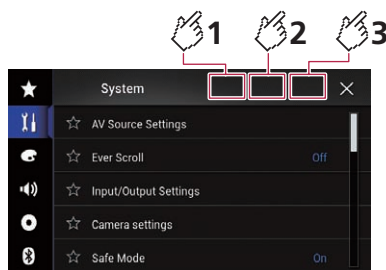
Setting the password

1 Display the "System" setting screen.

- ➔ Refer to *Displaying the "System" setting screen* on page 58

2 Touch 1, followed by 2, and then touch and hold 3.

Other functions



3 Touch [Set Password].

4 Enter the password.

- 5 to 16 characters can be entered for a password.

5 Touch [Go].

6 Enter a password hint.

- Up to 40 characters can be entered for a hint.

7 Touch [Go].

- If you want to change the password currently set, enter the current password and then enter the new one.

8 Check the password, and then touch [OK].

Deleting the password

The current password and password hint can be deleted.

1 Display the “System” setting screen.

- ☞ Refer to *Displaying the “System” setting screen* on page 58

2 Touch , followed by , and then touch and hold .

- ☞ Refer to *Setting the password* on page 70.

3 Touch [Clear Password].

4 Touch [Yes].

5 Touch [OK].

6 Enter the current password.

7 Touch [Go].

A message indicating that the security setting is cancelled appears.

Restoring this product to the default settings

You can restore settings or recorded content to the default settings. Various methods are used to clear user data.

Method 1: Remove the vehicle battery

- Some of the settings and recorded contents will not be reset.

Method 2: Restore the default settings from the “System” menu

- ☞ Refer to *Restoring the default settings* on page 71.

Method 3: Press the RESET button

- ☞ Refer to *Resetting the microprocessor* on page 4
- Some of the settings and recorded contents will not be reset.

Restoring the default settings

⚠CAUTION

Do not turn off the engine while restoring the settings.

- This setting is available only when you stop your vehicle in a safe place and apply the handbrake.

1 Display the “System” setting screen.

- ☞ Refer to *Displaying the “System” setting screen* on page 58

2 Touch [AV Source Settings].

3 Touch [Restore Settings].

A message confirming whether to initialise the settings appears.

4 Touch the item you want to initialise.

- **All Settings**
Almost all settings or recorded content returns to the default.
- **Audio Settings**
 - This setting is available when the source is turned off.
- **Theme Settings**
- **Bluetooth Settings**
- 5 Touch [Restore].

Appendix

Troubleshooting

If you have problems operating this product, refer to this section. The most common problems are listed below, along with likely causes and solutions. If a solution to your problem cannot be found here, contact your dealer or the nearest authorised Pioneer service facility.

Common problems

A black screen is displayed, and operation is not possible using the touch panel keys.

- “Power OFF” mode is on.
 - Press any button on this product to release the mode.
- The rear view camera image is displayed with no camera connection and the wrong camera polarity setting.
 - Press and hold the **MAP** button to release the rear view camera screen and then change the camera polarity setting to “Battery”.

Problems with the AV screen

CD or DVD playback is not possible.

- The disc is inserted upside down.
 - Insert the disc with the label upward.
- The disc is dirty.
 - Clean the disc.
- The disc is cracked or otherwise damaged.
 - Insert a normal, round disc.
- The files on the disc are in an irregular file format.
 - Check the file format.
- The disc format cannot be played back.
 - Replace the disc.
- The loaded disc is a type this product cannot play.
 - Check what type of disc it is.

The screen is covered by a caution message and the video cannot be shown.

- The handbrake lead is not connected or the handbrake is not applied.
 - Connect the handbrake lead correctly, and apply the handbrake.
- The handbrake interlock is activated.
 - Park your vehicle in a safe place and apply the handbrake.

No video output from the connected equipment.

- The “AV Input” or “AUX Input” setting is incorrect.
 - Correct the settings.

The audio or video skips.

- This product is not firmly secured.
 - Secure this product firmly.

Appendix

No sounds are produced. The volume level will not rise.

- Cables are not connected correctly.
 - Connect the cables correctly.
- The system is performing still, slow motion, or frame-by-frame playback with DVD-Video.
 - There is no sound during still, slow motion, or frame-by-frame playback with DVD-Video.
- The system is paused or performing fast reverse or forwards during the disc playback.
 - For the media other than music CD (CD-DA), there is no sound on fast reverse or forwards.

The icon is displayed, and operation is impossible.

- The operation is not compatible with the video configuration.
 - The operation is not possible. (For example, the DVD playing does not feature that angle, audio system, subtitle language, etc.)

The picture stops (pauses) and this product cannot be operated.

- The reading of data is impossible during disc playback.
 - Stop playback once, then restart.

The picture is stretched, with an incorrect aspect ratio.

- The aspect setting is incorrect for the display.
 - Select the appropriate setting for that image.

A parental lock message is displayed and DVD playback is not possible.

- The parental lock is on.
 - Turn the parental lock off or change the level.

The parental lock for DVD playback cannot be cancelled.

- The code number is incorrect.
 - Input the correct code number.

The DVD video is not played back with the audio/subtitle language specified in "DVD/DivX Setup".

- The DVD does not support the language selected in "DVD/DivX Setup".
 - Playback in the selected language is not possible if the language selected in "DVD/DivX Setup" is not recorded on the disc.

The picture is extremely unclear/distorted and dark during playback.

- The disc features a signal to prohibit copying. (Some discs may have this.)
 - Since this product is compatible with the copy guard analogue copy protect system, the picture may suffer from horizontal stripes or other imperfections when a disc with that kind of protection signal is viewed on some displays. This is not a malfunction.

iPod cannot be operated.

- The iPod is frozen.
 - Reconnect the iPod with the USB interface cable for iPod/iPhone.
 - Update the iPod software version.
- An error has occurred.
 - Reconnect the iPod with the USB interface cable for iPod/iPhone.
 - Park your vehicle in a safe place, and then turn off the ignition switch (ACC OFF). Subsequently, turn the ignition switch to on (ACC ON) again.
 - Update the iPod software version.
- Cables are not connected correctly.
 - Connect the cables correctly.

Sound from the iPod cannot be heard.

- The audio output direction may switch automatically when the Bluetooth and USB connections are used at the same time.
 - Use the iPod to change the audio output direction.

Problems with the phone screen

Dialling is impossible because the touch panel keys for dialling are inactive.

- Your phone is out of range for service.
 - Retry after re-entering the range for service.
- The connection between the mobile phone and this product cannot be established.
 - Perform the connection process.

Problems with the Application screen

A black screen is displayed.

- While operating an application, the application was ended on the smartphone side.
 - Press the  button to display the top menu screen.
- The smartphone OS may be awaiting screen operation.
 - Stop the vehicle in a safe place and check the screen on the smartphone.

The screen is displayed, but operation does not work at all.

- An error has occurred.
 - Park your vehicle in a safe place, and then turn off the ignition switch (ACC OFF). Subsequently, turn the ignition switch to on (ACC ON) again.
 - When an Android device is connected, disconnect the Bluetooth connection from this product and then reconnect it.

The smartphone was not charged.

- Charging stopped because the temperature of the smartphone rose due to prolonged use of the smartphone during charging.
 - Disconnect the smartphone from the cable, and wait until the smartphone cools down.
- More battery power was consumed than was gained from charging.
 - This problem may be resolved by stopping any unnecessary services on the smartphone.

The status of the vehicle for the forwards and backwards directions are reversed.

- Since part of the vehicle status is sent to the connected device when you use the **Android Auto** function, this problem occurs when the reverse gear polarity setting of this product is incorrect.
 - Check the polarity and re-select the correct setting.

Error messages

When problems occur with this product, an error message appears on the display. Refer to the table below to identify the problem, then take the suggested corrective action. If the error persists, record the error message and contact your dealer or your nearest Pioneer service centre.

Common

AMP Error

- This product fails to operate or the speaker connection is incorrect; the protective circuit is activated.
 - Check the speaker connection. If the message fails to disappear even after the engine is switched off/on, contact your dealer or an authorised Pioneer Service Station for assistance.

TEMP

- The temperature of this product is outside the normal operating range.
 - Wait until this product returns to a temperature within the normal operating limits.

Product overheat, For protection the System will shut down automatically in 1 minute. Re-cycle the ignition to restart the product if this message keeps showing, please contact your dealer or local service centre

- The temperature is too high for this product to operate.
 - Follow the instructions displayed on the screen. If this does not solve the problem, contact your dealer or an authorised Pioneer Station for assistance.

Appendix

Positioning is not possible due to hardware error. Please consult your dealer or local authorised service centre.

- The location display is not possible due to hardware failure.
 - Contact your dealer or an authorised Pioneer Station for assistance.

No GPS antenna. Check connection.

- GPS reception is lost.
 - Check the aerial connection. If the message fails to disappear even after the engine is switched off/on, contact your dealer or an authorised Pioneer Station for assistance.

GPS antenna problem detected. Contact dealer or service center.

- GPS aerial lead is short-circuited.
 - Contact your dealer or an authorised Pioneer Station for assistance.

Calibration will start, but may be inaccurate without speed pulse.

- The speed pulse sensor is not connected correctly.
 - Contact your dealer or an authorised Pioneer Station for assistance.

Sensor error. Please contact your dealer or Pioneer Service Center.

- An error has occurred with the sensor.
 - Contact your dealer or an authorised Pioneer Station for assistance.

Detected unusual speed pulses.

- The speed pulse cannot be detected correctly.
 - Contact your dealer or an authorised Pioneer Station for assistance.

Detected changes in the installation angle or position. The in-dash receiver is updating the sensor learning data.

- Changes in the installation angle or position are detected.
 - Wait until the sensor learning finishes.

Speed pulse wire is not connected. The system will operate in simple hybrid mode.

- Speed pulse wire is not connected.
 - The speed pulse cannot be detected if the speed pulse wire is not connected correctly.

DAB tuner

Check Antenna

- The aerial connection is incorrect.
 - Check the aerial connection. If the message fails to disappear even after the engine is switched off/on, contact your dealer or the nearest authorised Pioneer service centre for assistance.

Disc

Error-02-XX/FF-FF

- The disc is dirty.
 - Clean the disc.
- The disc is scratched.
 - Replace the disc.
- The disc is loaded upside down.
 - Check that the disc is loaded correctly.
- There is an electrical or mechanical error.
 - Press the **RESET** button.

Different Region Disc

- The disc does not have the same region number as this product.
 - Replace the DVD with one bearing the correct region number.

Unplayable Disc

- This type of disc cannot be played on this product.
 - Replace the disc with one that can be played on this product.

Unplayable File

- This type of file cannot be played on this product.
 - Select a file that can be played.

Skipped

- The inserted disc contains DRM protected files.
 - The protected files are skipped.

Protect

- All the files on the inserted disc are embedded with DRM.
 - Replace the disc.

This DivX rental has expired.

- The inserted disc contains expired DivX VOD content.
 - Select a file that can be played.

Video resolution not supported

- Files that cannot be played on this product are included in the file.
 - Select a file that can be played.

Unable to write to flash memory

- The playback history for VOD contents cannot be saved for some reason.
 - Retry.
 - If the message appears frequently, consult your dealer.

Your device is not authorized to play this DivX protected video.

- This product's DivX registration code has not been authorised by the DivX VOD contents provider.
 - Register this product to the DivX VOD contents provider.

Video frame rate not supported

- DivX file's frame rate is more than 30 fps.
 - Select a file that can be played.

Audio Format not supported

- This type of file is not supported on this product.
 - Select a file that can be played.

External storage device (USB, SD)

Error-02-9X/-DX

- Communication failed.
 - Turn the ignition switch OFF and back ON.
 - Disconnect the USB storage device.
 - Change to a different source. Then, return to the USB storage device.

Unplayable File

- This type of file cannot be played on this product.
 - Select a file that can be played.
- Security for the connected external storage device (USB, SD) is enabled.
 - Follow the external storage device (USB, SD) instructions to disable security.

Skipped

- The connected external storage device (USB, SD) contains DRM protected files.
 - The protected files are skipped.

Protect

- All the files on the connected external storage device (USB, SD) are embedded with DRM.
 - Replace the external storage device (USB, SD).

Incompatible USB

- The connected USB storage device is not supported by this product.
 - Disconnect your device and replace it with a compatible USB storage device.

Incompatible SD

- The SD memory card is not supported by this product.
 - Remove your device and replace it with a compatible SD memory card.
 - Format the SD memory card. It is recommended that you use SD Formatter for formatting SD memory cards.

Appendix

Check USB

- The USB connector or USB cable has short-circuited.
 - Check that the USB connector or USB cable is not caught in something or damaged.
- The connected USB storage device consumes more than maximum allowable current.
 - Disconnect the USB storage device and do not use it. Turn the ignition switch to OFF, then to ACC or ON and then connect a compliant USB storage device.

HUB Error

- The connected USB hub is not supported by this product.
 - Directly connect the USB storage device to this product.

No Response

- This product cannot recognise the connected USB storage device.
 - Disconnect the device and replace it with another USB storage device.

Video resolution not supported

- Files that cannot be played on this product are included in the file.
 - Select a file that can be played.

USB1 was disconnected for device protection. Do not re-insert this USB memory into the unit. Press reset to restart USB memory.

(USB2 was disconnected for device protection. Do not re-insert this USB memory into the unit. Press reset to restart USB memory.)

- The USB connector or USB cable is short-circuited.
 - Check that the USB connector or USB cable is not caught in something or damaged.
- The connected USB storage device consumes more than maximum allowable current.
 - Disconnect the USB storage device and do not use it. Turn the ignition switch to OFF, then to ACC or ON and then connect a compliant USB storage device.
- The USB interface cable for iPod / iPhone is short-circuited.
 - Confirm that the USB interface cable for iPod / iPhone or USB cable is not caught in something or damaged.

Audio Format not supported

- This type of file is not supported on this product.
 - Select a file that can be played.

iPod

Error-02-6X/-9X/-DX

- iPod failure.
 - Disconnect the cable from the iPod. Once the iPod's main menu is displayed, reconnect the iPod and reset it.

Error-02-67

- The iPod firmware version is old.
 - Update the iPod version.

iTunes tagging

Error-8D

- Built-in FLASH ROM encountered an error.
 - Turn the ignition switch to OFF and then to ON.

Tag store failed.

- Tag information cannot be stored in this product.
 - Try again.

Already stored.

- This tag information is already stored in memory.
 - Tag information can only be saved once for any given song. Tag information cannot be saved for the same song more than once.

Memory full. Connect iPod.

- The tag information is successfully stored. The flash memory of this product has become full.
 - The tag information on this product is transferred to the iPod automatically when an iPod is connected.

Memory full. Tags not stored. Connect iPod.

- This product's flash memory used as the temporary storage area is full.
 - The tag information on this product is transferred to the iPod automatically when an iPod is connected.

iPod full. Tags not transferred.

- Memory used for tag information on the iPod is full.
 - Synchronize the iPod with iTunes and clean up the tagged playlist.

Tag transfer failed. Reconnect your iPod.

- This product's tag information cannot transfer to the iPod.
 - Check the iPod and try again.

Apple CarPlay

Attempting to connect to Apple CarPlay.

- Communication failed and the system is trying to connect.
- Wait for a while. Then, perform the actions below if the error message is still displayed.
 - Restart the iPhone.
 - Disconnect the cable from the iPhone, and then connect the iPhone again after a few seconds.
 - Turn the ignition switch to OFF and then to ON.
- If the error message is still displayed after performing the above action, please contact your dealer or an authorised Pioneer Service Station.

Bluetooth

Error-10

- The power failed for the Bluetooth module of this product.
 - Turn the ignition switch to OFF and then to ON.
- If the error message is still displayed after performing the above action, please contact your dealer or an authorised Pioneer Service Station.

Android Auto

Android Auto has stopped.

- The connected device is not compatible with **Android Auto**.
 - Check if the device is compatible with **Android Auto**.
- The startup of **Android Auto** failed for some reasons.
 - Disconnect the cable from the smartphone, and then connect the smartphone again after a few seconds.
 - Restart the smartphone.
 - Turn the ignition switch to OFF and then to ON.
- If the error message is still displayed after performing the above action, please contact your dealer or an authorised Pioneer Service Station.
- The time set in this product is not correct.
 - Check if GPS signals are received and the time is correctly set.

Bluetooth pairing failed. Please pair your Android phone manually.

- The Bluetooth pairing failed for some reasons.
 - Pair this product with the device manually.

Android Auto cannot connect right now. When safe to do so, please check your Android phone.

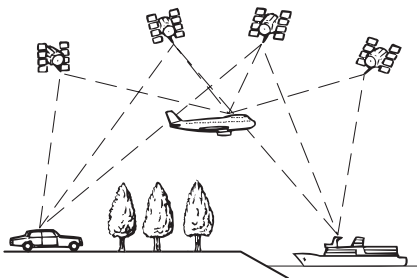
- The default settings are displayed on the screen of the Android Auto-compatible device or images are not output from the Android Auto-compatible device.
 - Park your vehicle in a safe place, and follow the instructions displayed on the screen. If the error message is still displayed after performing a on-screen instructions, please reconnect the device.

Positioning technology

Positioning by GPS

The Global Positioning System (GPS) uses a network of satellites orbiting the Earth. Each of the satellites, which orbit at a height of 68 900 000 feet (21 000 km), continually broadcasts radio signals giving time and position information. This ensures that signals from at least three can be picked up from any open area on the earth's surface.

The accuracy of the GPS information depends on how good the reception is. When the signals are strong and reception is good, GPS can determine latitude, longitude and altitude for accurate positioning in three dimensions. But if signal quality is poor, only two dimensions, latitude and longitude, can be obtained and positioning errors are somewhat greater.



Positioning by dead reckoning

The built-in sensor in the navigation system also calculates your position. The current location is measured by detecting driving distance with the speed pulse, the turning direction with the gyro sensor and inclination of the road with the G sensor.

The built-in sensor can even calculate changes of altitude, and correct the discrepancies in the distance travelled caused by driving along winding roads or up slopes.

If you use this navigation system with connecting the speed pulse, the system will become more accurate than no connection of speed pulse. So you connect the speed pulse without fail to get the accuracy of positioning.

- The position of the speed detection circuit vary depending on the vehicle model. For details, consult your authorised Pioneer dealer or an installation professional.

- Some types of vehicles may not output a speed signal while driving at just a few kilometres per hour. In such a case, the current location of your vehicle may not be displayed correctly while in traffic jam or in a car park.

How do GPS and dead reckoning work together?

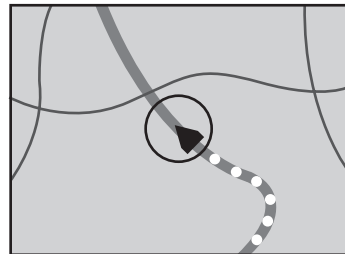
For maximum accuracy, your navigation system continually compares GPS data with your estimated position as calculated from the data of built-in sensor. However, if only the data from the built-in sensor is available for a long period, positioning errors are gradually compounded until the estimated position becomes unreliable. For this reason, whenever GPS signals are available, they are matched with the data of the built-in sensor and used to correct it for improved accuracy.

- If you use chains on your wheels for winter driving or put on the spare wheel, errors may suddenly increase because of difference in wheel diameter. Initialise the sensor status and it may recover the accuracy to normal condition.
 - ➔ For details, refer to *Clearing the status* on page 62.

Map matching

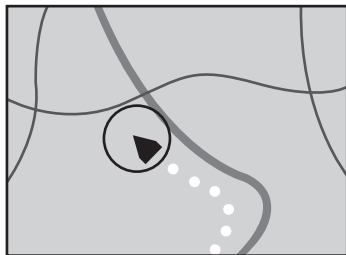
As mentioned, the positioning systems used by this navigation system are susceptible to certain errors. Their calculations may, on occasion, place you in a location on the map where no road exists. In this situation, the processing system understands that vehicles travel only on roads, and can correct your position by adjusting it to a nearby road. This is called map matching.

With map matching



Without map matching

Appendix



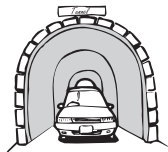
Handling large errors

Positioning errors are kept to a minimum by combining GPS, dead reckoning and map matching. However, in some situations, these functions may not work properly, and the error may become bigger.

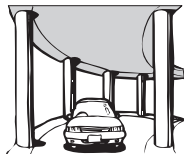
When positioning by GPS is impossible

- GPS positioning is disabled if signals cannot be received from more than two GPS satellites.
- In some driving conditions, signals from GPS satellites may not reach your vehicle. In this case, it is impossible for the system to use GPS positioning.

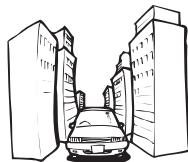
In tunnels or enclosed parking garages



Under elevated roads or similar structures



When driving among high buildings



When driving through a dense forest or tall trees

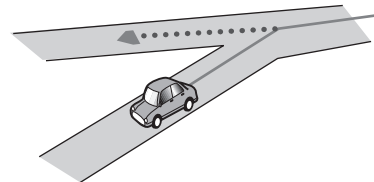


- If a car phone or mobile phone is used near the GPS aerial, GPS reception may be lost temporarily.
- Do not cover the GPS aerial with spray paint or car wax, because this may block the reception of GPS signals. Snow buildup can also degrade the signals, so keep the aerial clear.
- If a GPS signal has not been received for a long time, your vehicle's actual position and the current position mark on the map may diverge considerably or may not be updated. In such case, once GPS reception is restored, accuracy will be recovered.

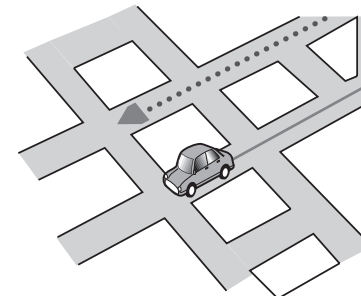
Conditions likely to cause noticeable positioning errors

For various reasons, such as the state of the road you are travelling on and the reception status of the GPS signal, the actual position of your vehicle may differ from the position displayed on the map screen.

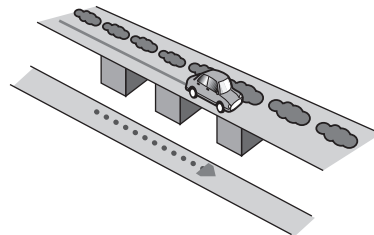
- If you make a slight turn.



- If there is a parallel road.

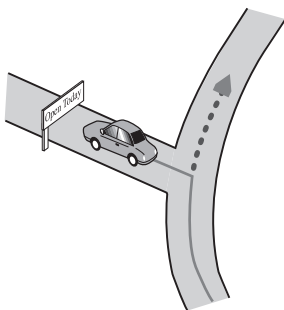


- If there is another road very nearby, such as in the case of an elevated motorway.

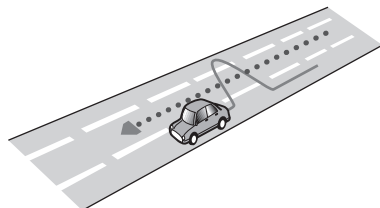


- If you take a recently opened road that is not on the map.

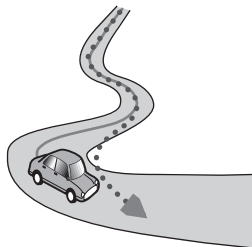
Appendix



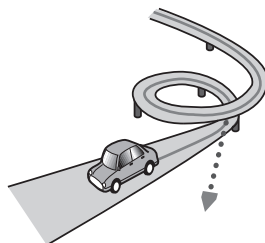
- If you drive in zigzags.



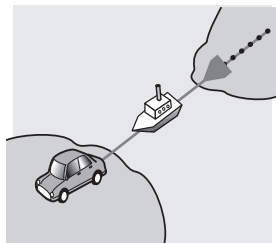
- If the road has a series of hairpin bends.



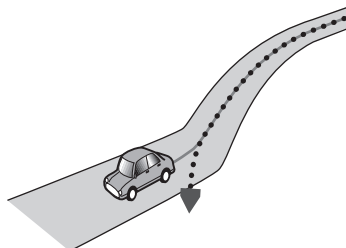
- If there is a loop or similar road configuration.



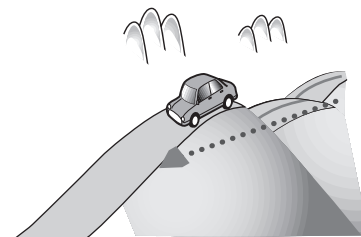
- If you take a ferry.



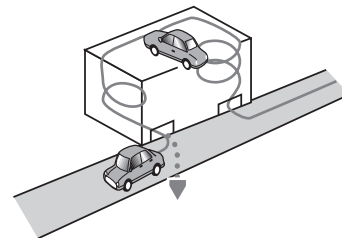
- If you are driving on a long, straight road or a gently curving road.



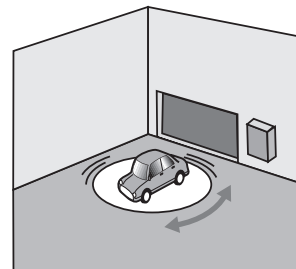
- If you are on a steep mountain road with many height changes.



- If you enter or exit a multi-storey car park or similar structure using a spiral ramp.



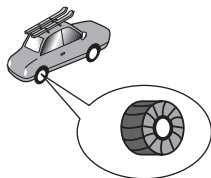
- If your vehicle is turned on a turntable or similar structure.



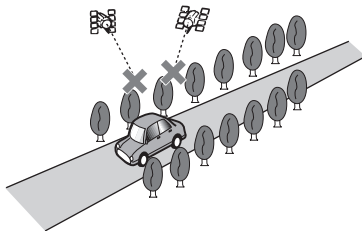
- If your vehicle's wheels spin, such as on a rough track or in snow.



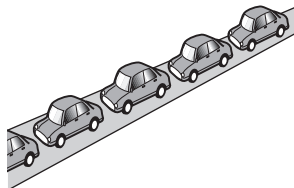
- If you put on chains, or change your tyres for ones with a different size.



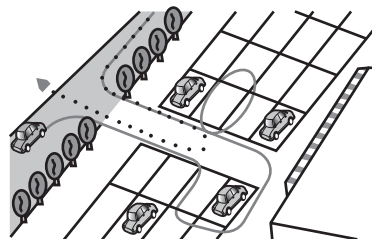
- If trees or other obstacles block the GPS signals for a considerable period.



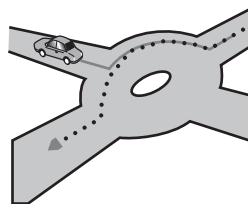
- If you drive very slowly, or in a start-and-stop manner, as in a traffic jam.



- If you join the road after driving around a large car park.



- When you drive around a roundabout.



- When starting driving immediately after starting the engine.

Route setting information

Route search specifications

Your navigation system sets a route to your destination by applying certain built-in rules to the map data. This section provides some useful information about how a route is set.

⚠ CAUTION

When a route is calculated, the route and voice guidance for the route are automatically set. Also, for day or time traffic regulations, only information about traffic regulations applicable at the time when the route was calculated is considered. One-way streets and street closures may not be taken into consideration. For example, if a street is open during the morning only, but you arrive later, it would be against the traffic regulations so you cannot drive along the set route. When driving, please follow the actual traffic signs. Also, the system may not know some traffic regulations.

- The calculated route is one example of the route to your destination decided by the navigation system while taking the type of streets or traffic regulations into account. It is not necessarily an optimum route. (In some cases, you may not be able to set the streets you want to take. If you need to take a certain street, set a waypoint on that street.)
- If the destination is too far, there may be instances where the route cannot be set. (If you want to set a long-distance route going across several areas, set waypoints along the way.)
- During voice guidance, turns and intersections from the motorway are announced. However, if you pass intersections, turns, and other guidance points in rapid succession, some may delay or not be announced.
- It is possible that guidance may direct you off a motorway and then back on again.
- In some cases, the route may require you to travel in the opposite direction to your current heading. In such cases, you are instructed to turn around, so please turn around safely by following the actual traffic rules.
- In some cases, a route may begin on the opposite side of a railway or river from your actual current location. If this happens, drive towards your destination for a while, and try route calculation again.
- When there is a traffic jam ahead, a detour route may not be suggested if driving through the traffic jam would still be better than taking the detour.
- There may be instances when the starting point, the waypoint and the destination point are not on the highlighted route.

Appendix

- The number of roundabout exits displayed on the screen may differ from the actual number of roads.

Route highlighting

- Once set, the route is highlighted in bright colour on the map.
- The immediate vicinity of your starting point and destination may not be highlighted, and neither will areas with particularly complex road layouts. Consequently, the route may appear to be cut off on the display, but voice guidance will continue.

Auto reroute function

- If you deviate from the set route, the system will re-calculate the route from that point so that you remain on track to the destination.
- This function may not work under certain conditions.

Handling and care of discs

Some basic precautions are necessary when handling your discs.

Built-in drive and care

- Use only conventional, fully circular discs. Do not use shaped discs.
- Do not use cracked, chipped, warped, or otherwise damaged discs as they may damage the built-in drive.
- Use 12-cm discs. Do not use 8-cm discs or an adapter for 8-cm discs.
- When using discs that can be printed on label surfaces, check the instructions and the warnings of the discs. Depending on the discs, inserting and ejecting may not be possible. Using such discs may result in damage to this equipment.
- Do not attach labels, write on or apply chemicals to the surface of the discs.
- Do not attach commercially available labels or other materials to the discs.
- To clean a disc, wipe it with a soft cloth, moving outward from the centre.
- Condensation may temporarily impair the built-in drive's performance.
- Playback of discs may not be possible because of disc characteristics, disc format, recorded application, playback environment, storage conditions and so on.
- Road shocks may interrupt disc playback.
- Read the precautions for discs before using them.

Ambient conditions for playing a disc

- At extremely high temperatures, a temperature cutout protects this product by switching it off automatically.
- Despite our careful design of the product, small scratches that do not affect actual operation may appear on the disc surface as a result of mechanical wear, ambient conditions for use or handling of the disc. This is not a sign of the malfunction of this product. Consider it to be normal wear and tear.

Playable discs

DVD-Video



- ❑ **DVD** is a trademark of DVD Format/Logo Licensing Corporation.
- It is not possible to play DVD-Audio discs. This DVD drive may not be able to play all discs bearing the marks shown above.

CD



AVCHD recorded discs

This unit is not compatible with discs recorded in AVCHD (Advanced Video Codec High Definition) format. Do not insert AVCHD discs. If inserted, the disc may not be ejected.

Playing DualDisc

- DualDiscs are two-sided discs that have a recordable CD for audio on one side and a recordable DVD for video on the other.
- Playback of the DVD side is possible with this product. However, since the CD side of DualDiscs is not physically compatible with the general CD standard, it may not be possible to play the CD side with this product.
- Frequent loading and ejecting of a DualDisc may result in scratches to the disc.
- Serious scratches can lead to playback problems on this product. In some cases, a DualDisc may become stuck in the disc-loading slot and will not eject. To prevent this, we recommend you refrain from using DualDisc with this product.
- Please refer to the manufacturer for more detailed information about DualDiscs.

Dolby Digital

This product will down-mix Dolby Digital signals internally and the sound will be output in stereo.

- ❑ Manufactured under license from Dolby Laboratories. Dolby and the double-D symbol are trademarks of Dolby Laboratories.



Detailed information for playable media

Compatibility

Common notes about disc compatibility

- Certain functions of this product may not be available for some discs.
- Compatibility with all discs is not guaranteed.
- It is not possible to play back DVD-RAM discs.

Appendix

- Playback of discs may become impossible with direct exposure to sunlight, high temperatures, or depending on the storage conditions in the vehicle.

DVD-Video discs

- DVD-Video discs that have incompatible region numbers cannot be played on this DVD drive. The region number of the player can be found on this product's chassis.

DVD-R/DVD-RW/DVD-R SL (Single Layer)/DVD-R DL (Dual Layer) discs

- Unfinalised discs which have been recorded with the Video format (video mode) cannot be played back.
- Discs which have been recorded with the Video Recording format (VR mode) cannot be played back.
- DVD-R DL (Dual Layer) discs which have been recorded with Layer Jump recording cannot be played back.
- For detailed information about recording mode, please contact the manufacturer of media, recorders, or writing software.

CD-R/CD-RW discs

- Unfinalised discs cannot be played back.
- It may not be possible to playback CD-R/CD-RW discs recorded on a music CD recorder or a computer because of disc characteristics, scratches or dirt on the disc, or dirt, scratches or condensation on the lens of the built-in drive.
- Playback of discs recorded on a computer may not be possible, depending on the recording device, writing software, their settings, and other environmental factors.
- Please record with the correct format. (For details, please contact manufacturer of media, recorders, or writing software.)
- Titles and other text information recorded on a CD-R/CD-RW disc may not be displayed by this product (in the case of audio data (CD-DA)).
- Read the precautions with CD-R/CD-RW discs before using them.

Common notes about the external storage device (USB, SD)

- Do not leave the external storage device (USB, SD) in any location with high temperatures.
- Depending on the kind of the external storage device (USB, SD) you use, this product may not recognize the storage device or files may not be played back properly.
- The text information of some audio and video files may not be correctly displayed.
- File extensions must be used properly.
- There may be a slight delay when starting playback of files on an external storage device (USB, SD) with complex folder hierarchies.

- Operations may vary depending on the kind of an external storage device (USB, SD).
- It may not be possible to play some music files from SD or USB because of file characteristics, file format, recorded application, playback environment, storage conditions, and so on.
- Copyright protected files cannot be played back.

SD memory cards

- For details about SD memory card compatibility with this product, refer to *Specifications* on page 85
- Some SD memory cards may not be recognised by this unit even if the SD memory cards can be recognised by a computer. Formatting the SD memory cards using a dedicated formatter may resolve the problem. SD memory cards formatted using the standard formatting function on a computer do not comply with the SD standard. Problems such as that those cards cannot be read or written could occur. It is recommended that you use a dedicated formatter to avoid such problems. All of the data stored on an SD memory card will be deleted when the card is formatted. Back up any needed data beforehand as necessary. A dedicated formatter for SD memory cards can be obtained from the following site:
<http://www.sdcard.org/>
- This product is not compatible with the Multi Media Card (MMC).

USB storage devices

- For details about USB storage device compatibility with this product, refer to *Specifications* on page 85.
- Protocol: bulk
- You cannot connect a USB storage device to this product via a USB hub.
- Partitioned USB storage device is not compatible with this product.
- Firmly secure the USB storage device when driving. Do not let the USB storage device fall onto the floor, where it may become jammed under the brake or accelerator.
- There may be a slight delay when starting playback of audio files encoded with image data.
- Some USB storage devices connected to this product may generate noise on the radio.
- Do not connect anything other than the USB storage device.
- For a USB storage device that plays music files alone, the playback or search sequence with this product may be different from that of the device.

Common notes about DivX files

- Only DivX files downloaded from DivX partner sites are guaranteed for proper operation. Unauthorised DivX files may not operate properly.

- DRM rental files cannot be operated until playing back is started.
- This product corresponds to a DivX file display of up to 1 590 minutes 43 seconds. Search operations beyond this time limit are prohibited.
- DivX VOD file playback requires supplying the ID code of this product to the DivX VOD provider. Regarding the ID code, refer to *Displaying your DivX VOD registration code* on page 68.
- For details on the Divx video versions that can be played on this product, refer to *Specifications* on page 85.
- For more details about DivX, visit the following site:
<http://www.divx.com/>

DivX subtitle files

- Srt format subtitle files with the extension ".srt" can be used.
- Only one subtitle file can be used for each DivX file. Multiple subtitle files cannot be associated.
- Subtitle files that are named with the same character string as the DivX file before the extension are associated with the DivX file. The character strings before the extension must be exactly the same. However, if there is only one DivX file and one subtitle file in a single folder, the files are associated even if the file names are not the same.
- The subtitle file must be stored in the same folder as the DivX file.
- Up to 255 subtitle files may be used. Any more subtitle files will not be recognised.
- Up to 64 characters can be used for the name of the subtitle file, including the extension. If more than 64 characters are used for the file name, the subtitle file may not be recognised.
- The character code for the subtitle file should comply with ISO-8859-1. Using characters other than ISO-8859-1 may cause the characters to be displayed incorrectly.
- The subtitles may not be displayed correctly if the displayed characters in the subtitle file include control code.
- For materials that use a high transfer rate, the subtitles and video may not be completely synchronised.
- If multiple subtitles are programmed to display within a very short time frame, such as 0.1 seconds, the subtitles may not be displayed at the correct time.

Media compatibility chart

General

- Files may not be played back properly depending on the environment in which the file was created or on the contents of the file.

Appendix

- This product may not play back files, depending on the application used to encode the files.
- This product may not operate correctly, depending on the application used to encode WMA files.
- Depending on the version of Windows Media™ Player used to encode WMA files, album names and other text information may not be correctly displayed.
- There may be a slight delay when starting playback of audio files encoded with image data.
- This product is not compatible with packet write data transfer.
- This product can recognise up to 32 characters, beginning with the first character, including extension for the file and folder name. Depending on the display area, this product may try to display them with a reduced font size. However, the maximum number of the characters that you can display varies according to the width of each character, and of the display area.
- Folder selection sequence or other operations may be altered, depending on the encoding or writing software.
- Regardless of the length of blank section between the songs of original recording, compressed audio discs play with a short pause between songs.
- Maximum playback time of audio file stored in the disc: 60 h
- Maximum playback time of audio file stored on an external storage device (USB, SD): 7.5 h (450 minutes)
- This product assigns folder numbers. The user cannot assign folder numbers.

CD-R/-RW

File system: ISO9660 level 1.ISO9660 level 2.Romeo, Joliet.UDF 1.02/1.50/2.00/2.01/2.50

Maximum number of folders: 700

Maximum number of files: 999

Playable file types: MP3, WMA, AAC, DivX, MPEG1, MPEG2, MPEG4

DVD-R/-R SL/-R DL/ DVD-RW

File system: ISO9660 level 1.ISO9660 level 2.Romeo, Joliet.UDF 1.02/1.50/2.00/2.01/2.50

Maximum number of folders: 700

Maximum number of files: 3 500

Playable file types: MP3, WMA, AAC, DivX, MPEG1, MPEG2, MPEG4

USB storage device/SD memory card

File system: FAT16/FAT32/NTFS

Maximum number of folders: 1 500

Maximum number of files: 15 000

Playable file types: MP3, WMA, AAC, WAV, FLAC, H.264, MPEG-2, MPEG-4, WMV, FLV, MKV, JPEG

MP3 compatibility

- Ver. 2.x of ID3 tag is prioritised when both Ver. 1.x and Ver. 2.x exist.
- This product is not compatible with the following: MP3i (MP3 interactive), mp3 PRO, m3u playlist

CD-R/-RW, DVD-R/-R SL/-R DL/DVD-RW

File extension: .mp3

Bit rate: 8 kbps to 320 kbps (CBR), VBR

Sampling frequency: 16 kHz to 48 kHz (32 kHz, 44.1 kHz, 48 kHz for emphasis)

ID3 tag: ID3 tag Ver. 1.0, 1.1, 2.2, 2.3

USB storage device/SD memory card

File extension: .mp2, .mp3, .m2a, .mka

Bit rate: 8 kbps to 320 kbps (CBR), VBR

Sampling frequency: 8 kHz to 48 kHz

ID3 tag: ID3 tag Ver. 1.0, 1.1, 2.2, 2.3, 2.4

WMA compatibility

- This product is not compatible with the following: Windows Media™ Audio 9 Professional, Lossless, Voice

CD-R/-RW, DVD-R/-R SL/-R DL/DVD-RW

File extension: .wma

Bit rate: 5 kbps to 320 kbps (CBR), VBR

Sampling frequency: 8 kHz to 48 kHz

USB storage device/SD memory card

File extension: .wma

Bit rate: 5 kbps to 320 kbps (CBR), VBR

Sampling frequency: 8 kHz to 48 kHz

WAV compatibility

- The sampling frequency shown in the display may be rounded.
- WAV files on the CD-R/-RW, DVD-R/-RW/-R SL/-R DL cannot be played.

USB storage device/SD memory card

File extension: .wav

Format: Linear PCM (LPCM)

Sampling frequency: 16 kHz to 48 kHz

Quantization bits: 8 bits and 16 bits

AAC compatibility

- This product plays back AAC files encoded by iTunes.

CD-R/-RW, DVD-R/-R SL/-R DL/DVD-RW

File extension: .m4a

Bit rate: 8 kbps to 320 kbps (CBR)

Sampling frequency: 8 kHz to 44.1 kHz

USB storage device/SD memory card

File extension: .aac, .adts, .mka, .m4a

Bit rate: 8 kbps to 320 kbps (CBR)

Sampling frequency: 8 kHz to 48 kHz

FLAC compatibility

- FLAC files on the CD-R/-RW, DVD-R/-RW/-R SL/-R DL cannot be played.

USB storage device/SD memory card

File extension: .flac, .ogg

Bit rate: 8 kbps, 16 kbps, 24 kbps

Sampling frequency: 8 kHz to 48 kHz

DivX compatibility

- This product is not compatible with the following: DivX Ultra format, DivX files without video data, DivX files encoded with LPCM (Linear PCM) audio codec
- Depending on the file information composition, such as the number of audio streams, there may be a slight delay in the start of playback on discs.
- If a file contains more than 4 GB, playback stops before the end.
- Some special operations may be prohibited because of the composition of DivX files.
- Files with high transfer rates may not be played back correctly. The standard transfer rate is 4 Mbps for CDs and 10.08 Mbps for DVDs.
- DivX files on the external storage device (USB, SD) cannot be played.

CD-R/-RW, DVD-R/-R SL/-R DL/DVD-RW

File extension: .avi/.divx

Profile (DivX version): Home Theater Ver. 3.11/Ver. 4.x/Ver. 5.x/Ver. 6.x

Compatible audio codec: MP3, Dolby Digital

Bit rate (MP3): 8 kbps to 320 kbps (CBR), VBR

Sampling frequency (MP3): 16 kHz to 48 kHz (32 kHz, 44.1 kHz, 48 kHz for emphasis)

Maximum image size: 720 pixels × 576 pixels

Maximum file size: 4 GB

Audio and video files compatibility (USB, SD)

- Files may not be able to be played back depending on the bit rate.
- Only USB storage devices can play back VOB files.

.avi

Compatible video codec: MPEG-4/H.264/H.263/Divx

Compatible audio codec: Linear PCM (LPCM)/MP3/AAC

Appendix

Maximum resolution: 720 pixels × 480 pixels
Maximum Frame rate: 30 fps
Maximum file size: 4 GB
Maximum playback time: 150 minutes

.mp4

Compatible video codec: MPEG-4/H.264/H.263
Compatible audio codec: MP3/AAC
Maximum resolution: 720 pixels × 480 pixels
Maximum Frame rate: 30 fps
Maximum file size: 4 GB
Maximum playback time: 150 minutes

.3gp

Compatible video codec: MPEG-4/H.264/H.263
Compatible audio codec: AAC
Maximum resolution: 720 pixels × 480 pixels
Maximum Frame rate: 30 fps
Maximum file size: 4 GB
Maximum playback time: 150 minutes

.mkv

Compatible audio codec: MPEG-4/H.264/VC-1/Xvid
Compatible audio codec: MP3/AAC/Vorbis
Maximum resolution: 720 pixels × 480 pixels
Maximum Frame rate: 30 fps
Maximum file size: 4 GB
Maximum playback time: 150 minutes

.mov

Compatible video codec: MPEG-4/H.264/H.263
Compatible audio codec: MP3/AAC
Maximum resolution: 720 pixels × 480 pixels
Maximum Frame rate: 30 fps
Maximum file size: 4 GB
Maximum playback time: 150 minutes

.f4v

Compatible video codec: H.264/H.263
Compatible audio codec: MP3/AAC
Maximum resolution: 720 pixels × 480 pixels
Maximum Frame rate: 30 fps
Maximum file size: 4 GB
Maximum playback time: 150 minutes

.wmv

Compatible video codec: WMV/VC-1
Compatible audio codec: WMA
Maximum resolution: 720 pixels × 480 pixels
Maximum Frame rate: 30 fps
Maximum file size: 4 GB
Maximum playback time: 150 minutes

.asf

Compatible video codec: WMV/VC-1

Compatible audio codec: WMA
Maximum resolution: 720 pixels × 480 pixels
Maximum Frame rate: 30 fps
Maximum file size: 4 GB
Maximum playback time: 150 minutes

.flv

Compatible video codec: H.264
Compatible audio codec: MP3/AAC
Maximum resolution: 720 pixels × 480 pixels
Maximum Frame rate: 30 fps
Maximum file size: 4 GB
Maximum playback time: 150 minutes

.vob

Compatible video codec: H.264/MPEG-2
Compatible audio codec: Linear PCM (LPCM)/MP3/AAC
Maximum resolution: 720 pixels × 480 pixels
Maximum Frame rate: 30 fps
Maximum file size: 4 GB
Maximum playback time: 150 minutes

Bluetooth



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SDHC



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WMA/WMV

Windows Media is either a registered trademark or trademark of Microsoft Corporation in the United States and/or other countries.

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FLAC

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DivX



Appendix

DivX Certified® devices have been tested for high-quality DivX® (.divx, .avi) video playback. When you see the DivX logo, you know you have the freedom to play your favourite DivX movies. DivX®, DivX Certified® and associated logos are trademarks of DivX, LLC and are used under license.

This DivX Certified® device has passed rigorous testing to ensure it plays DivX® video.

To play purchased DivX movies, first register your device at vod.divx.com. Find your registration code in the DivX VOD section of your device setup menu.

➔ Refer to *Displaying your DivX VOD registration code* on page 68

AAC

AAC is short for Advanced Audio Coding and refers to an audio compression technology standard used with MPEG-2 and MPEG-4. Several applications can be used to encode AAC files, but file formats and extensions differ depending on the application which is used to encode. This unit plays back AAC files encoded by iTunes.

Google, Google Play, Android™

Google, Google Play and Android are trademarks of Google Inc.

Android Auto



Android Auto is a trademark of Google Inc.

MIXTRAX

MIXTRAX is a trademark of the PIONEER CORPORATION.

Detailed information regarding connected iPod devices

- Pioneer accepts no responsibility for data lost from an iPod, even if that data is lost while using this product. Please back up your iPod data regularly.
- Do not leave the iPod in direct sunlight for extended amounts of time. Extended exposure to direct sunlight can result in iPod malfunction due to the resulting high temperature.

- Do not leave the iPod in any location with high temperatures.
- Firmly secure the iPod when driving. Do not let the iPod fall onto the floor, where it may become jammed under the brake or accelerator.
 - ➔ For details, refer to the iPod manuals.

iPhone and iPod



"Made for iPod" and "Made for iPhone" mean that an electronic accessory has been designed to connect specifically to iPod or iPhone, respectively, and has been certified by the developer to meet Apple performance standards.

Apple is not responsible for the operation of this device or its compliance with safety and regulatory standards.

Please note that the use of this accessory with iPod or iPhone may affect wireless performance.

iPhone, iPod, iPod classic, iPod nano, and iPod touch are trademarks of Apple Inc., registered in the U.S. and other countries.

Lightning

Lightning is a trademark of Apple Inc.

App Store

App Store is a service mark of Apple Inc.

iOS

iOS is a trademark on which Cisco holds the trademark right in the US and certain other countries.

iTunes

iTunes is a trademark of Apple Inc., registered in the U.S. and other countries.

Apple Music

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Apple CarPlay



Apple CarPlay is a trademark of Apple Inc.

Use of the Apple CarPlay logo means that a vehicle user interface meets Apple performance standards. Apple is not responsible for the operation of this vehicle or its compliance with safety and regulatory standards. Please note that the use of this product with iPhone or iPod may affect wireless performance.

Using app-based connected content

Important

Requirements to access app-based connected content services using this product:

- Latest version of the Pioneer compatible connected content application(s) for the smartphone, available from the service provider, downloaded to your smartphone.
- A current account with the content service provider.
- Smartphone Data Plan.
Note: if the Data Plan for your smartphone does not provide for unlimited data usage, additional charges from your carrier may apply for accessing app-based connected content via 3G, EDGE and/or LTE (4G) networks.
- Connection to the Internet via 3G, EDGE, LTE (4G) or Wi-Fi network.
- Optional Pioneer adapter cable connecting your iPhone to this product.

Limitations:

- Access to app-based connected content will depend on the availability of cellular and/or Wi-Fi network coverage for the purpose of allowing your smartphone to connect to the Internet.

Appendix

- Service availability may be geographically limited to the region. Consult the connected content service provider for additional information.
- Ability of this product to access connected content is subject to change without notice and could be affected by any of the following: compatibility issues with future firmware versions of smartphone; compatibility issues with future versions of the connected content application(s) for the smartphone; changes to or discontinuation of the connected Content application(s) or service by its provider.
- Pioneer is not liable for any issues that may arise from incorrect or flawed app-based content.
- The content and functionality of the supported applications are the responsibility of the App providers.
- In **AppRadio Mode**, **Apple CarPlay** and **Android Auto**, functionality through the product is limited while driving, with available functions determined by the App providers.
- Availability of **AppRadio Mode**, **Apple CarPlay** and **Android Auto** functionalities is determined by the App provider, and not determined by Pioneer.
- **AppRadio Mode**, **Apple CarPlay** and **Android Auto** allow access to applications other than those listed (subject to limitations while driving), but the extent to which content can be used is determined by the App providers.

HDMI



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MHL

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IVONA Text-to-Speech



Notice regarding video viewing

Remember that use of this system for commercial or public viewing purposes may constitute an infringement on the author's rights as protected by the Copyright Law.

Notice regarding DVD-Video viewing

This item incorporates copy protection technology that is protected by U.S. patents and other intellectual property rights of Rovi Corporation. Reverse engineering and disassembly are prohibited.

Notice regarding MP3 file usage

Supply of this product only conveys a license for private, non-commercial use and does not convey a license nor imply any right to use this product in any commercial (i.e. revenue-generating) real time broadcasting (terrestrial, satellite, cable and/or any other media), broadcasting/streaming via internet, intranets and/or other networks or in other electronic content distribution systems, such as pay-audio or audio-on-demand applications. An independent license for such use is required. For details, please visit <http://www.mp3licensing.com>.

Notice regarding open source licences

For details about the open source licences for the functions that this product is equipped with, please visit <http://www.oss-pioneer.com/car/multimedia/>

Map coverage

For details about the map coverage of this product, refer to the information on our website.

Using the LCD screen correctly

Handling the LCD screen

- When the LCD screen is subjected to direct sunlight for a long period of time, it will become very hot, resulting in possible damage to the LCD screen. When not using this product, avoid exposing it to direct sunlight as much as possible.
- The LCD screen should be used within the temperature ranges shown in *Specifications* on page 85.
- Do not use the LCD screen at temperatures higher or lower than the operating temperature range, because the LCD screen may not operate normally and could be damaged.
- The LCD screen is exposed in order to increase its visibility within the vehicle. Please do not press strongly on it as this may damage it.
- Do not push the LCD screen with excessive force as this may scratch it.
- Never touch the LCD screen with anything besides your finger when operating the touch panel functions. The LCD screen can scratch easily.

Liquid crystal display (LCD) screen

- If the LCD screen is near the vent of an air conditioner, make sure that air from the air conditioner is not blowing on it. Heat from the heater may break the LCD screen, and cool air from the cooler may cause moisture to form inside this product, resulting in possible damage.
- Small black dots or white dots (bright dots) may appear on the LCD screen. These are due to the characteristics of the LCD screen and do not indicate a malfunction.
- The LCD screen will be difficult to see if it is exposed to direct sunlight.
- When using a mobile phone, keep the aerial of the mobile phone away from the LCD screen to prevent disruption of the

Appendix

video in the form of disturbances such as spots or coloured stripes.

Maintaining the LCD screen

- When removing dust from or cleaning the LCD screen, first turn this product off and then wipe the screen with a soft dry cloth.
- When wiping the LCD screen, take care not to scratch the surface. Do not use harsh or abrasive chemical cleaners.

LED (light-emitting diode) backlight

A light emitting diode is used inside the display to illuminate the LCD screen.

- At low temperatures, using the LED backlight may increase image lag and degrade the image quality because of the characteristics of the LCD screen. Image quality will improve with an increase in temperature.
- The product lifetime of the LED backlight is more than 10 000 hours. However, it may decrease if used in high temperatures.
- If the LED backlight reaches the end of its product lifetime, the screen will become dimmer and the image will no longer be visible. In that case, please consult your dealer or the nearest authorised Pioneer Service Station.

Specifications

General

Rated power source 14.4 V DC
(12.0 - 14.4 V allowable)

Earthring system Negative type

Maximum current consumption 10.0 A

Dimensions (W × H × D):

F88DAB

DIN

Chassis 178 mm × 100 mm × 157 mm

Nose 188 mm × 118 mm × 29 mm

D

Chassis 178 mm × 100 mm × 164 mm

Nose 171 mm × 97 mm × 21 mm

F80DAB

DIN

Chassis 178 mm × 100 mm × 157 mm

Nose 188 mm × 118 mm × 27 mm

D

Chassis 178 mm × 100 mm × 164 mm

Nose 171 mm × 97 mm × 20 mm

F980DAB/F980BT/F9880DAB/F9880BT

DIN

Chassis 178 mm × 100 mm × 157 mm

Nose 188 mm × 118 mm × 16 mm

D

Chassis 178 mm × 100 mm × 164 mm

Nose 170 mm × 97 mm × 8 mm

F88DAB/F80DAB

Weight 2.1 kg

F980DAB/F980BT/F9880DAB/F9880BT

Weight 1.8 kg

NAND flash memory 16 GB

Navigation

GPS receiver:

System L1, C/Acode GPS

SPS (Standard Positioning Service)

Reception system 50-channel multi-channel reception system

Reception frequency 1 575.42 MHz

Sensitivity -140 dBm (typ)

Position update frequency Approx. once per second

GPS aerial:

Aerial Micro strip flat aerial/right-handed helical polarization

Aerial cable 3.55 m

Dimensions (W × H × D) 33 mm × 14.7 mm × 36 mm

Weight 73.7 g

Display

F88DAB/F80DAB

Screen size/aspect ratio 6.95 inch wide/16:9 (effective display area: 156.6 mm × 81.6 mm)

F980DAB/F980BT/F9880DAB/F9880BT

Screen size/aspect ratio 6.2 inch wide/16:9 (effective display area: 136.2 mm × 72 mm)

Pixels 1 152 000 (2 400 × 480)

Display method TFT Active matrix driving

Colour system PAL/NTSC/PAL-M/PAL-N/SECAM compatible

Durable temperature range:

Power off -20 °C to +80 °C

Audio

Maximum power output 50 W × 4

Continuous power output 22 W × 4 (50 Hz to 15 kHz, 5 %THD, 4 Ω LOAD, Both Channels Driven)

Load impedance 4 Ω (4 Ω to 8 Ω allowable)

Preout output level (max) 4.0 V

Equaliser (13-Band Graphic Equaliser):

Frequency 50 Hz/80 Hz/125 Hz/200 Hz/315 Hz/500 Hz/800 Hz

/1.25 kHz/2 kHz/3.15 kHz/5 kHz/8 kHz/12.5 kHz

Gain ±12 dB

HPE:

Frequency 50 Hz/63 Hz/80 Hz/100 Hz/125 Hz/160 Hz/200 Hz

Slope -6 dB/oct, -12 dB/oct, -18 dB/oct

Subwoofer (mono):

Frequency 50 Hz/63 Hz/80 Hz/100 Hz/125 Hz/160 Hz/200 Hz

Slope -6 dB/oct, -12 dB/oct, -18 dB/oct

Gain -24 dB to +10 dB

Phase Normal/Reverse

Time alignment 0 to 200 step (2.5 cm/step)

DVD drive

System DVD-Video, VCD, CD, MP3, WMA, AAC, DivX, MPEG player

Region number 2

Usable discs DVD-VIDEO, VIDEO-CD, CD, CD-R, CD-RW, DVD-R, DVD-RW, DVD-RDL

Frequency response 5 Hz to 44 000 Hz (with DVD, at sampling frequency 96 kHz)

Signal-to-noise ratio 96 dB (1 kHz) (IEC-A network) (RCA level)

Output level:

Video 1.0 Vp-p/75 Ω (±0.2 V)

Number of channels 2 (stereo)

MP3 decoding format MPEG-1, 2 & 2.5 Audio Layer 3

WMA decoding format Ver.7, 8, 9 (2 ch audio) (Windows Media Player)

AAC decoding format MPEG-4 AAC (iTunes encoded only): .m4a (Ver. 11 and earlier)

DivX decoding format Home Theater Ver.3.11, Ver.4.X, Ver.5.X, Ver.6.X : .avi, .divx

MPEG video decoding format MPEG-1: mpg, mpeg, dat
MPEG-2 PS: mpg, mpeg

MPEG-4 Part2 (Visual), MS MPEG-4 Ver.3: avi

USB

USB standard spec USB 1.1, USB 2.0 High speed

Max current supply 1.6 A

USB Class MSC (Mass Storage Class) device, iPod (AudioClass, HID Class) device

File system FAT16, FAT32, NTFS

MP3 decoding format MPEG-1/Layer 1, MPEG-1/Layer 2, MPEG-1/Layer 3, MPEG-2/Layer 1, MPEG-2/Layer 2, MPEG-2/Layer 3, MPEG-2.5/Layer 3

WMA decoding format WMA10 Std, WMA10 Pro, WMA9 Lossless

AAC decoding format MPEG-2 AAC-LC, MPEG-4 AAC-LC

WAV signal format Linear PCM

FLAC decoding format Ver. 1.3.0 (Free Lossless Audio Codec)

H.264 video decoding format Base Line Profile, Main Profile, High Profile

WMV4 video decoding format VC-1 SP/MP/AP, WMV 7/8

MPEG4 video decoding format Simple Profile, Advanced Simple Profile (except GMC)

Appendix

JPEG decoding formatJPEG

SD

F88DAB/F80DAB

Compatible physical format Version 2.0
File system FAT16, FAT32, NTFS
MP3 decoding format MPEG-1/Layer 1, MPEG-1/Layer 2,
MPEG-1/Layer 3, MPEG-2/Layer 1, MPEG-2/Layer 2, MPEG-2/
Layer 3, MPEG-2.5/Layer 3
WMA decoding format WMA10 Std, WMA10 Pro,
WMA9 Lossless
AAC decoding format MPEG-2 AAC-LC, MPEG-4 AAC-LC
WAV signal format Linear PCM
FLAC decoding format Ver. 1.3.0 (Free Lossless Audio Codec)
H.264 video decoding format Base Line Profile, Main Profile,
High Profile
WMV video decoding format VC-1 SP/MP/AP, WMV 7/8
MPEG4 video decoding format ..Simple Profile, Advanced Simple
Profile (except GMC)
JPEG decoding formatJPEG

Bluetooth

Version Bluetooth 3.0 + EDR certified
Output power..... +4 dBm Max.
(Power class 2)
Frequency band2 400 MHz to 2 483.5 MHz

FM tuner

Frequency range 87.5 MHz to 108.0 MHz
Usable sensitivity 11 dBf (0.8 μ V/75 Ω , mono, S/N: 30 dB)
Signal-to-noise ratio72 dB (IEC-A network)

MW tuner

Frequency range531 kHz to 1 602 kHz (9 kHz)
Usable sensitivity 25 μ V (S/N: 20 dB)
Signal-to-noise ratio62 dB (IEC-A network)

LW tuner

Frequency range 153 kHz to 281 kHz
Usable sensitivity 28 μ V (S/N: 20 dB)
Signal-to-noise ratio62 dB (IEC-A network)

DAB tuner

F88DAB/F80DAB

Frequency range
Band III174.928 MHz to 239.200 MHz (5A-13F)
L Band..... 1 452.960 MHz to 1 490.624 MHz (LA-LW)
Usable sensitivity-100 dBm
S/N RATIO.....85 dB

Specifications and design are subject to possible modifications without notice due to improvements.

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